

**ARCHITECTURE DEPARTMENT**

**MASTER OF ARCHITECTURE PROGRAMME**

**CHINESE UNIVERSITY OF HONG KONG**

**2009-2010**

**DESIGN REPORT**



## **SUSTAINING LIVING COMMUNITY**

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**May 2010**



Thesis Report

**SUSTAINING LIVING COMMUNITY** - Critical Review on Urban Redevelopment and Conservation

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M.Arch 2 | Spring | School of Architecture | CUHK

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## Thesis Statement

"I mainly want to establish at this point that the **DYNAMIC PROCESS OF THE CITY** tends more to **EVOLUTION** than preservation, and that in evolution monuments are not only preserved but continuously presented as propelling elements of development."

- The Architecture of the city, Aldo Rossi

Tenement houses, as a typical housing typology in Hong Kong, have shown **serious physical deterioration** and **fail to meet the contemporary living standard** today. Its renewal has become a critical social issue in most grown districts. However, the current urban renewal projects done by the URA are seems to be **inclined towards the profits of developers** and **neglecting the real needs of the local community**: the renewal projects often turns the tenement houses into **monotony, generic high rise residential with shopping podiums**. This kind of total reconstruction renewal **destroys the urban texture and community network**, discourages social life of the residences and pays no respect to the culture of the town.

This thesis goes **against total reconstruction** mode of renewal, whilst exploring the **potential of utilizing the existing tenement houses** as a point of departure. Renewal here is seen as an **incremental, bottom-up process**. Searching for a **balance between redevelopment and conservation**, the project explore an alternative design solution in improving the living standard of the tenement houses, **enhanced community living environment** without sacrificing the redevelopment needs.

The site was Shek Wu Hui(石湖墟), which is a **300-year-old market town** constituted of mainly 3 storeys tenement houses, with strong social connection between nearby markets and villages. The **strong community network** and **intact townscape** become the theoretical ground for the thesis to take place.

Street life is conserved through the conservation of the frontage of the tenement houses, while a layer of sharable living space is created through the reconstruction of the dilapidated back lane. The residents can extend their living and dining space into the communal zone and become space for interaction and exchange among neighbours. In this way the townscape and street life of traditional market town is sustained while the lives of the community is improved and enriched by the communal living space.



## Definition

### MARKET TOWN

**Market town** is seen here in the thesis a early **form of urbanism** where the **genesis** of the township is the **market activities**. The market activities sustained the early growth of the township, and became **diversified** when the town grows.

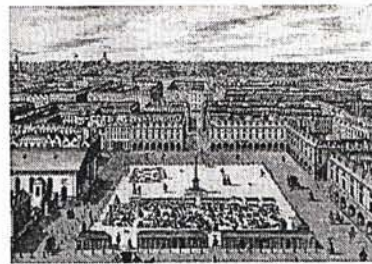
### MARKET TOWN IN DIFFERENT CONTEXT



清明上河圖，北宋，張擇端

“謹按鄉鎮貿易之地，百貨駢闐，其朝趨而午散，遠方咸集者曰墟，備朝夕之求，供饔飧之用者曰市。墟有定期，市無虛日，其大較也。”

- 民國《順德縣志》

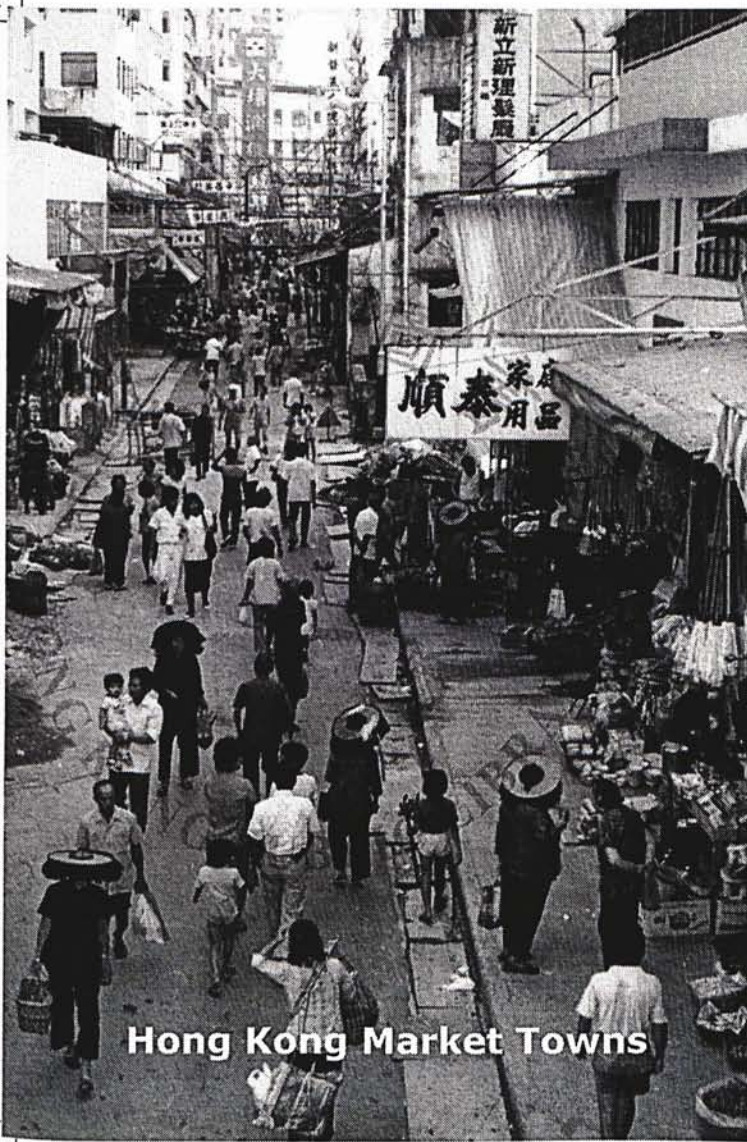


Covent Garden, 1750

"... the simplest case for the environment of trade is the unwalled town that was born or created exclusively for the exchange of goods. Market towns were, by nature, **small**: if they prospered and grew, **they also diversified**."

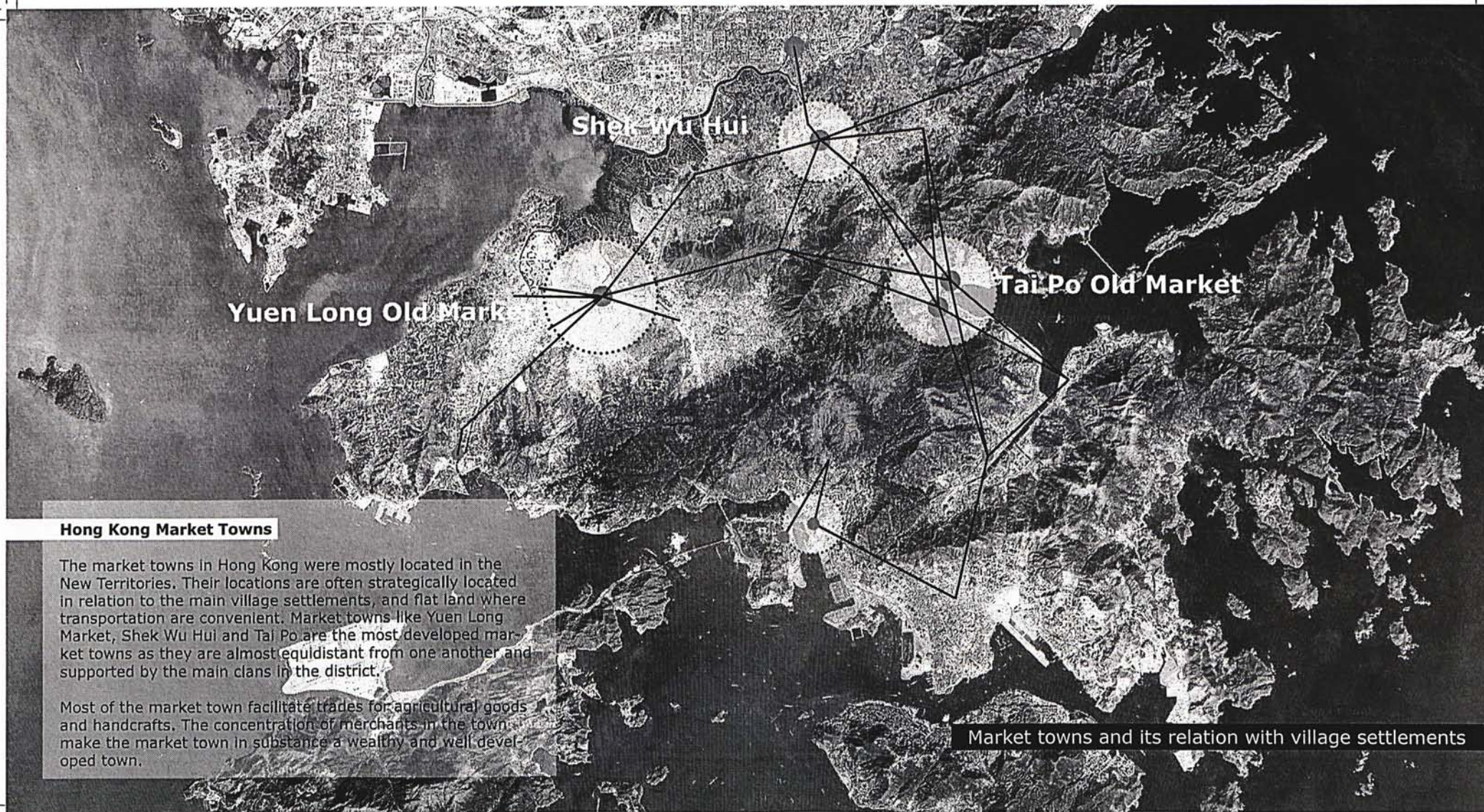
- The City Assembled, Spiro Kostof





Hong Kong Market Towns





### Hong Kong Market Towns

The market towns in Hong Kong were mostly located in the New Territories. Their locations are often strategically located in relation to the main village settlements, and flat land where transportation are convenient. Market towns like Yuen Long Market, Shek Wu Hui and Tai Po are the most developed market towns as they are almost equidistant from one another and supported by the main clans in the district.

Most of the market town facilitate trades for agricultural goods and handcrafts. The concentration of merchants in the town make the market town in substance a wealthy and well developed town.

Market towns and its relation with village settlements



Shek Wo Hui  
石湖墟  
1795

Site area / 119930m<sup>2</sup>  
Built area / 58625 m<sup>2</sup>  
Population/ 5524



Tai Po Old Market  
大埔舊墟  
1627

Site area / 28572 m<sup>2</sup>  
Built area / 12528 m<sup>2</sup>  
Population/ 8559



Yuen Long Old Market  
元朗舊墟  
1600

Site area / 34811 m<sup>2</sup>  
Built area / 26518 m<sup>2</sup>  
Population/ 2654



Luen Wo Hui  
聯和墟  
1951

Site area / 72252 m<sup>2</sup>  
Built area / 32584 m<sup>2</sup>  
Population / 4380



Major Market Towns in Hong Kong

Yuen Long New Market  
元朗新墟  
1915

Site area / 23377 m<sup>2</sup>  
Built area / 14054 m<sup>2</sup>  
Population / 2668



Tai Po Market  
大埔新墟  
1896

Site area / 29733 m<sup>2</sup>  
Built area / 14535 m<sup>2</sup>  
Population / 3938



## TAI PO OLD MARKET / TAI PO NEW MARKET



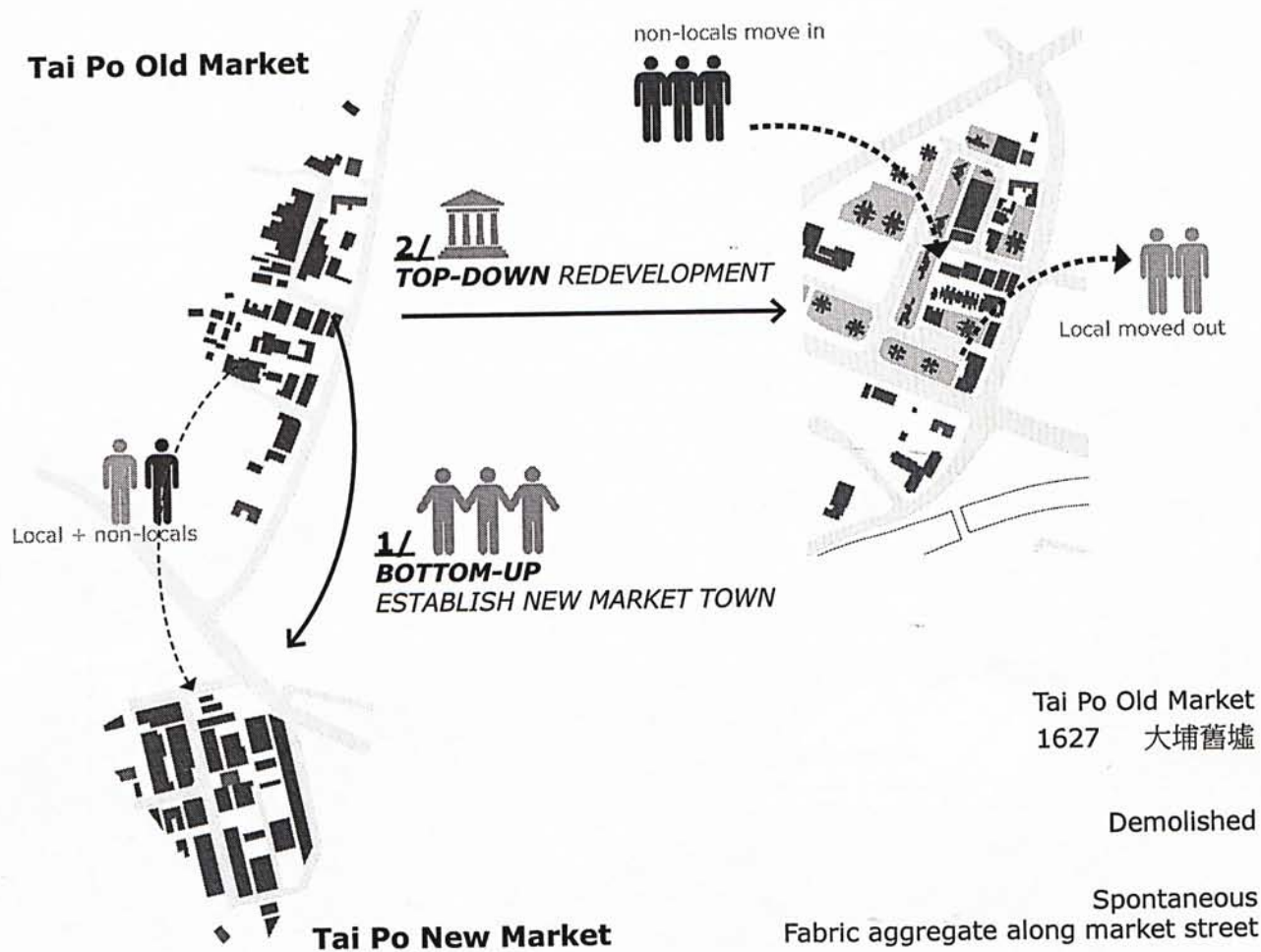
Tai Po Old Market was established in the 1627, located near the Tolo Harbour. Since Tai Po is in the middle of the New Territories, the British Government had chosen Tai Po as the District Office (理文府) in the early days of colonial governance. The New Market was built in the 1896, located across the Lam Tsuen River. The Old Market was redeveloped in the 80s under the New Town policy, only the temple, clinic and fire station were kept.

Tai Po Market - 1949

### General History

<u>Tai Po Old Market established</u>	1627
Tai Po Seven Contact was signed 大埔七約	1892
Man Mo Temple was built	
<u>Tai Po Market established</u>	1896
Tai Po Road was built	1902
Tai Po was selected as District Office governing the whole NT	1907
Tai Po Market train station started service	1913
<u>Land reclamation began</u>	1960s
<u>Tai Po New Town Planning</u>	1976
Tai Po Industrial Village was built	1978
The first public housing Tai Yuen Estate was completed	1980
New Tai Po train station was completed	1983
<u>Tai Po Old Market redeveloped</u>	
Tolo highway was complete	1985

## Tai Po Old Market



Tai Po Old Market  
1627 大埔舊墟

Demolished

Spontaneous

Fabric aggregate along market street

Tai Po New Market  
大埔新墟 1896

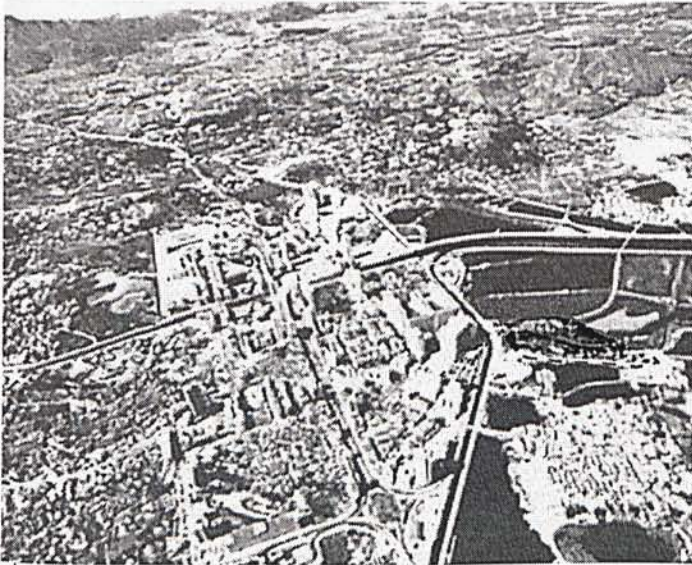
Vivid community  
Commercial and residential

Planned  
Fabric aggregate along market street



## YUEN LONG OLD MARKET / YUEN LONG NEW MARKET

Yuen Long Old Market was the oldest market town in Hong Kong. It was located near the Tang's family, which is the largest rural family in New Territories since the Song Dynasty (1500s). The old market was built in the 1600s, and most of the buildings are vernacular houses built by bricks. The new market was established in the early 1900s, and demolished under the government new town development in the 80s.



### General History

大王古廟 Tai Wong Temple was built  
玄關二帝廟 Yuen Kwan Yi Tai Temple was built

1600s

太橋墩墟 was moved to Yuen Long Market

1668

Yeun Long was governed under Tai Po District Office 理民府

1907

Yuen Long New Market was established

1915

Yeun Long District Office was form governing the Yuen Long and Castle Peak

1947

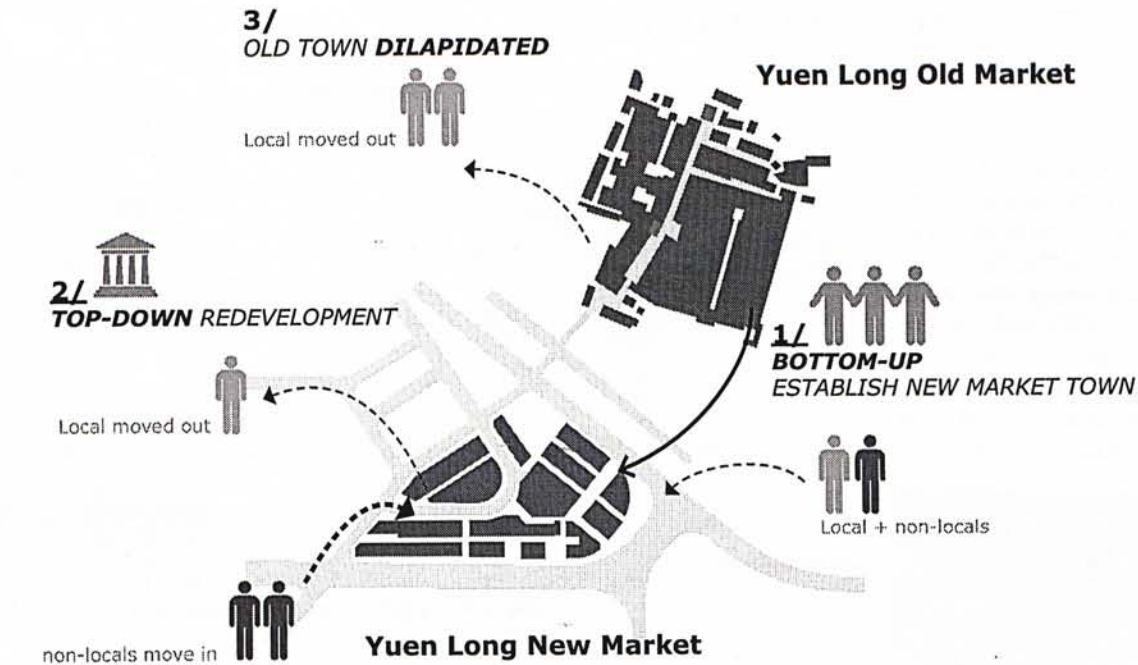
Yuen Long new town was introduced

1970s

Yuen Long New Market was demolished under government policy

1984

Markets with their relation to new development - 1978



Yuen Long Old Market 1600s 元朗舊墟	Yuen Long New Market 1915 元朗新墟
Preserved fabric Residential	Low sense of community Commercial and residential (Redeveloped)
Spontaneous Fabric aggregate along market street	Planned Without definition of marketplace

THE ORIGIN OF SHENZHEN - DONGMENLAOJIE

General History

The Shenzhen Market was one of the largest market town in the south, together with Yuen Long and Tai Po Market. Its network with the villages in Hong Kong was cut since the British borrowed the New Territories in the 1898. The Market underwent dramatic redevelopment under the Central Government SEZ scheme, turning the aged market into a contemporary commercial centre famous for its retail and leisure activities.

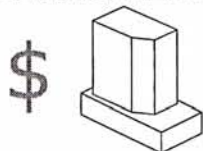


Location

Shenzhen Market was established as a major market town in southern china	1688
KCRC Guangzhou-Kowloon railway was established, Lo Wu station in service	1913
BaoAn province was moved to nowaday Shenzhen area	1957
<u>Shenzhen was assigned the Special Economic Zone</u>	1979
Consultation of the redevelopment of Dongmen Area began	1996
<u>Actual Scheme for dedevelopment of Dongmen area was announced</u>	1998
<u>Dongmen Laojie redevelopment began, the first phase of redevelopment completed</u>	1999



**TOP-DOWN REDEVELOPMENT**



Shops moved in



Tourists

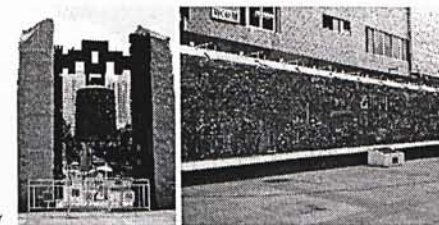


Local moved out

Dongmen / 1989



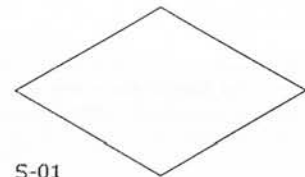
"Shopping Street" / Current



Rebuilt identity

## Development process

### MARKET TOWN FORMATION

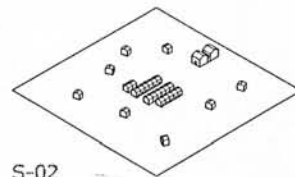


S-01

#### Virgin Land

Land located in equidistant to certain villages is selected to hold **market activities** to provide exchanges of agricultural goods and some other specialized products. The land are often **convenient in location** and **flat**.

---> settlement

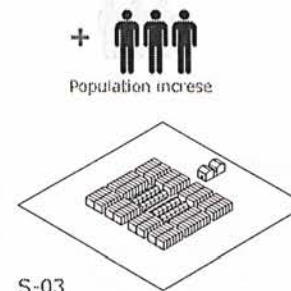


S-02

#### Periodic Market

Merchants travel between **periodic market**, some villagers and merchants chose to dwell in the market place. **Scattered settlements** and **market place** (usually in the form of market street or square) is formed.

---> growth

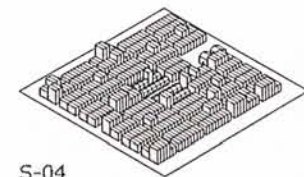


S-03

#### Market town

As the settlements grow, the market activities become daily and **primitive market town** is established. Basic communal buildings and public facilities are provided.

---> Intensification

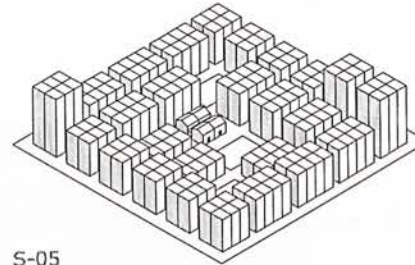


S-04

#### Saturated Town

The town reached its **maximum capacity**. Some new developments replaced the old fabrics. **Amalgamate of land lots** happen in large developments.

## REDEVELOPMENT

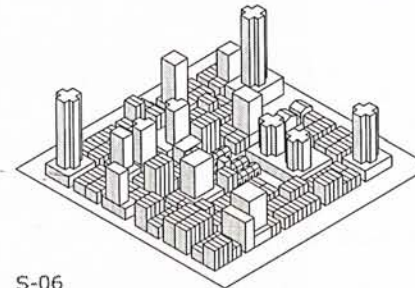
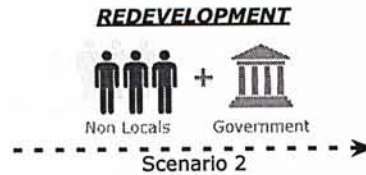


S-05

### / New Market Town

At the time where **land is sufficient**, it maybe more economical to find a **neighboring vacant land** to build a new town. Often the new town is in **close relationship** and **coexist** with the old market town.

Case / Luen Wo Market  
/ Tai Po New Market  
/ Yuen Long New Market

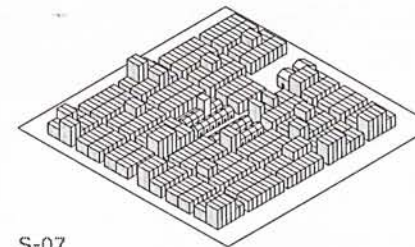
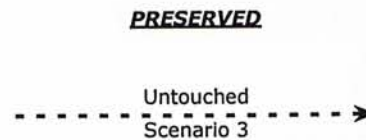


S-06

### / New Town

The government **top-down** redevelopment together with injection of **non-local population break down the original townscape and community**. Only some important buildings are preserved.

Case / Tai Po Old Market  
/ Yuen Long New Market  
/ Shenzhen Market (DongMen LaoJie)



S-07

### / Preserved

The town is left **untouched** as it become obsolete. It is **ineffective to renew or redevelop** the town as is too old and thus residents move out of the town.

Case / Yuen Long Old Market

**SWH I Shek Wu Hui**



## Background

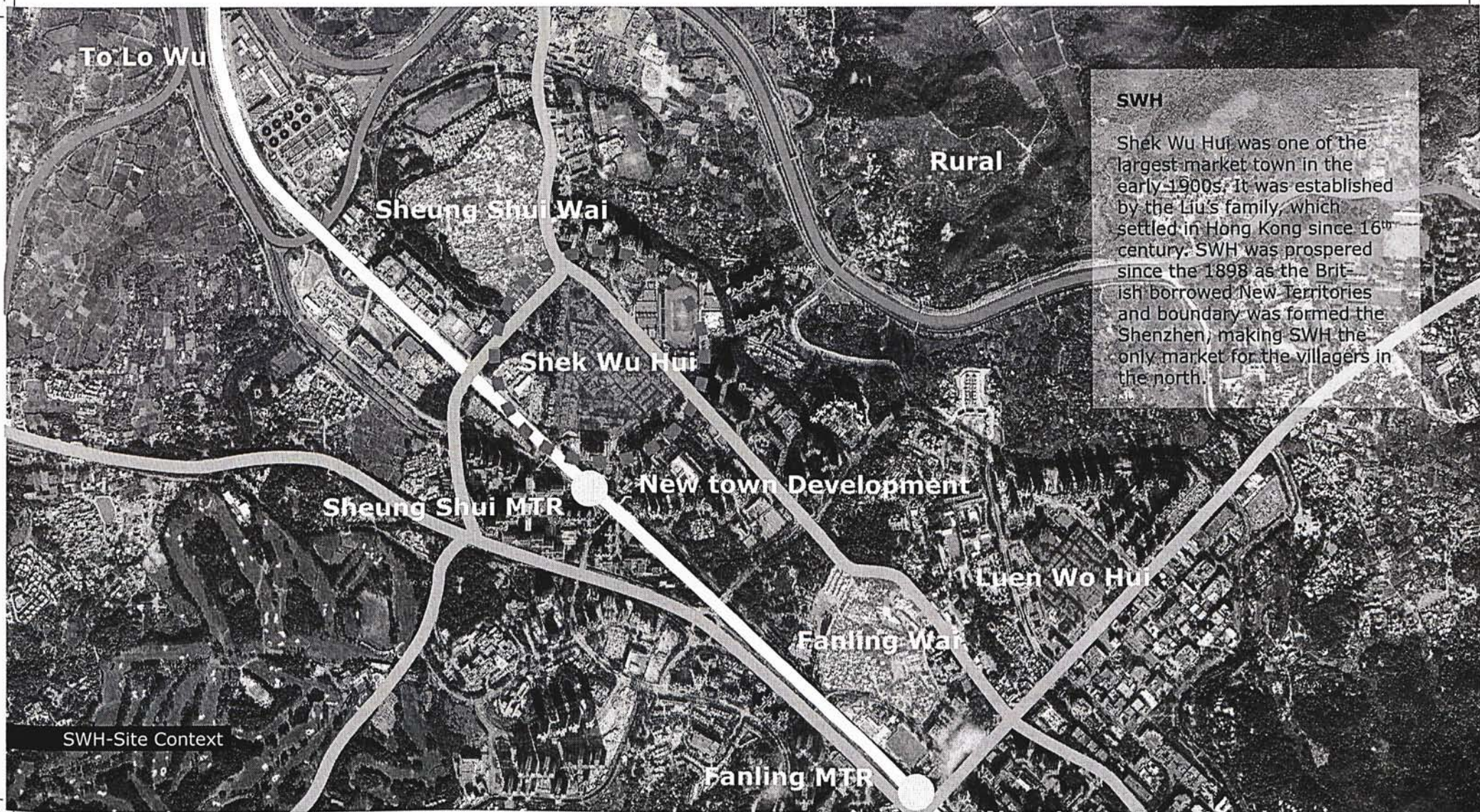


SWH, 1950



SWH, 2009





#### SWH

Shek Wu Hui was one of the largest market town in the early 1900s. It was established by the Liu's family, which settled in Hong Kong since 16<sup>th</sup> century. SWH was prospered since the 1898 as the British borrowed New Territories and boundary was formed the Shenzhen, making SWH the only market for the villagers in the north.



## Site Issue

THREATS OR OPPORTUNITIES ?

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[財經](#)
[大陸](#)
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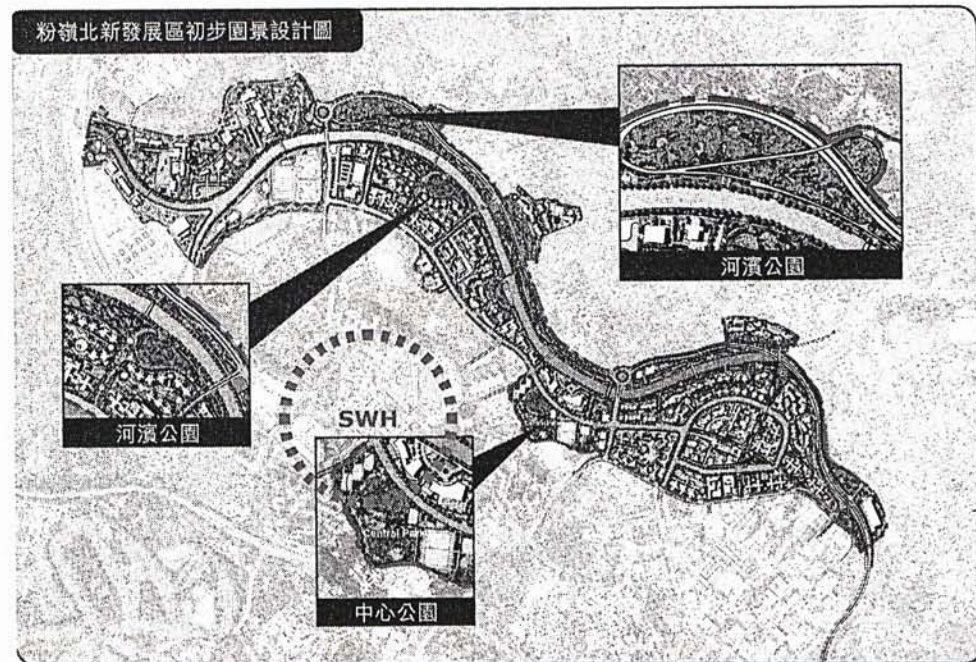
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Developers realized the potential of the SWH area and began to accumulate land



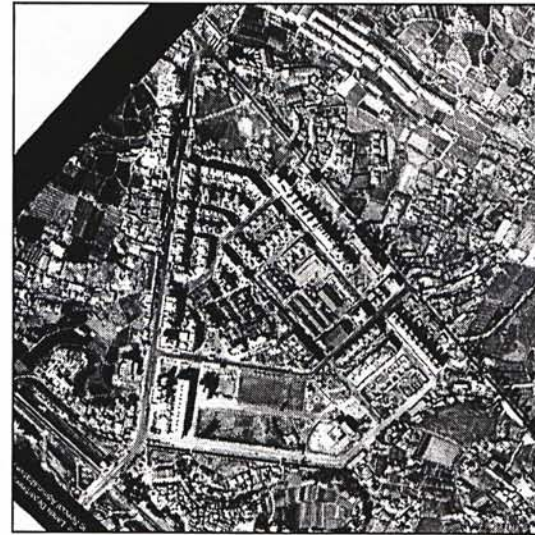
The NENTNDA- North East New Territories New Development Area study paper proposed by government will raise the land value of the neighbouring areas.



1945



1956



1964



1971



# relopment



976



1983



1995



2009

1950

1960

1970

1980

1946 Taipingqingjiao (太平清醮) was held

1646 The Liao family Sheung Shui Wai (廖氏上水圍) settled in northern part of today Sheung Shui

1930 Sheung Shui and Lo Wu KCR Station started service

1661-1669 Great Clearance

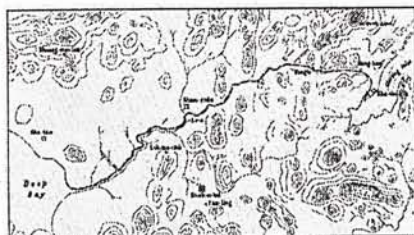
1951 Luen Wo Market in Fanling was established

1795 SHW was established as temporary periodic market

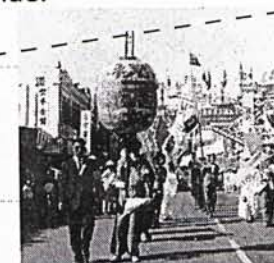
1955/1956 80% of SWH was damaged in fire

1941-1944 Japan occupation of Hong Kong

1898 The Convention for the Extension of Hong Kong Territory



1949 People Republic of China was established



1973 Introduction of

1966 - - - - Cultural Revolution - - - - 1976

$P_{1955} = 5000$

$P_{1898} = 120$   $P_{1911} = 43$

PRIMITIVE GROWTH

RAPID REDEVELOPMENT

STEADY GROWTH

DE



## Timeline

1980

1990

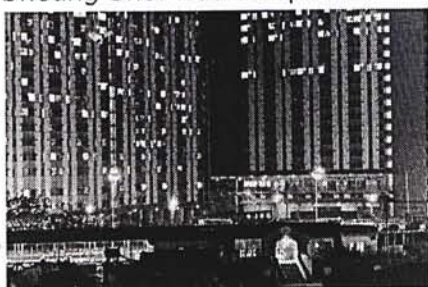
2000

2010

is established  
opening of



**1981** The first public housing Choi Yuen Estate in Sheung Shui was completed



of the New Town Policy

**1980** North District Town Hall and Community Centre

**1982** Relocation and expansion of the Sheung Shui  
The North District Board was established

**1993** The SWH Market was replaced by the new SWH Municipal Services Building

**1997** The handover of Hong Kong



**1999** Residents of SWH protest against slums clearance

**2002** The Hang Lok Cinema (行樂戲院) was demolished

**2003** The Individual Visit Scheme was introduced in four Guangdong cities under CEPA

**2006** Taipingqingjiao (太平清醮) was held



$P_{2001}=5151$

$P_{2006}=5524$

CONSTANT

FUTURE

DEVELOPMENT OF THE SHEUNG SHUI NEW TOWN



1945

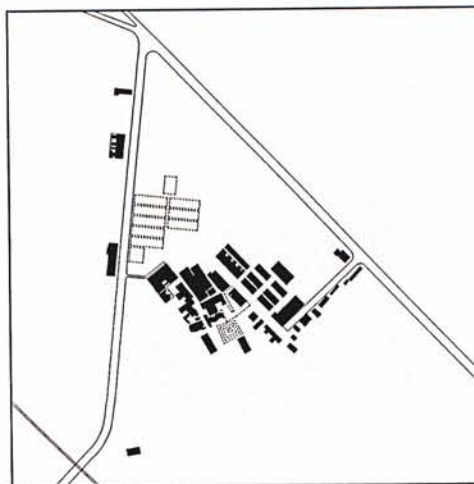
GROWTH

- Spontaneous growth of fabrics in centre
- Preliminary order shown near to market
- Two main traffic arteries, San Fung Avenue and Jockey Club Roads were primarily formed.

PUBLIC REALM



/ Bao De Temple (報德祠)  
/ Community Centre



1956

(+) / Cinema / Fire station  
/ Market / Hotel  
  
(-) / Bao De Temple (報德祠) was destroyed



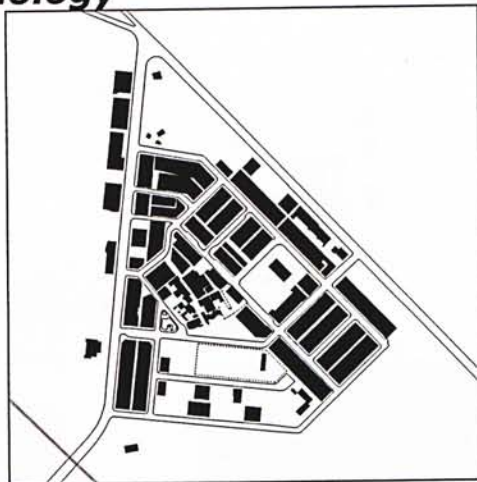
1961

- Basic town pattern and road network were established.
- The northern part of the new development was referenced on the previous demolished fabrics.



(+) / Shek Wu Hui Jockey Club Clinic  
/ Market extension  
/ Post office  
  
(-) / Park

## orphology



1972

- Road network was completed
- More tenement houses were built at the southern part.

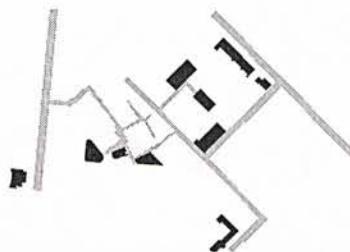


(+) / Sheung Shui Alliance Primary School  
/ Park

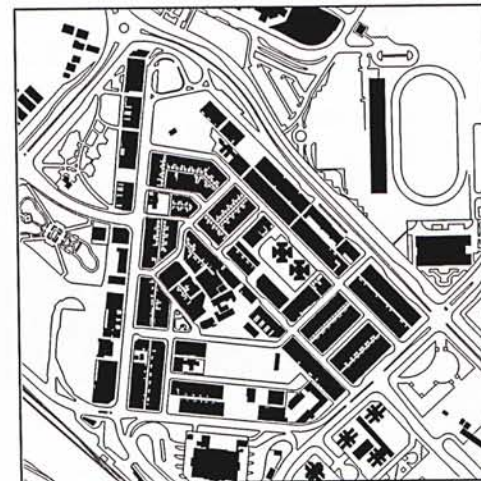


1983

- Connection to new town district
- More open space is provided for market activities.
- Train station relocated and expanded



(+) / Sheung Shui Alliance Church



Current

1:5000

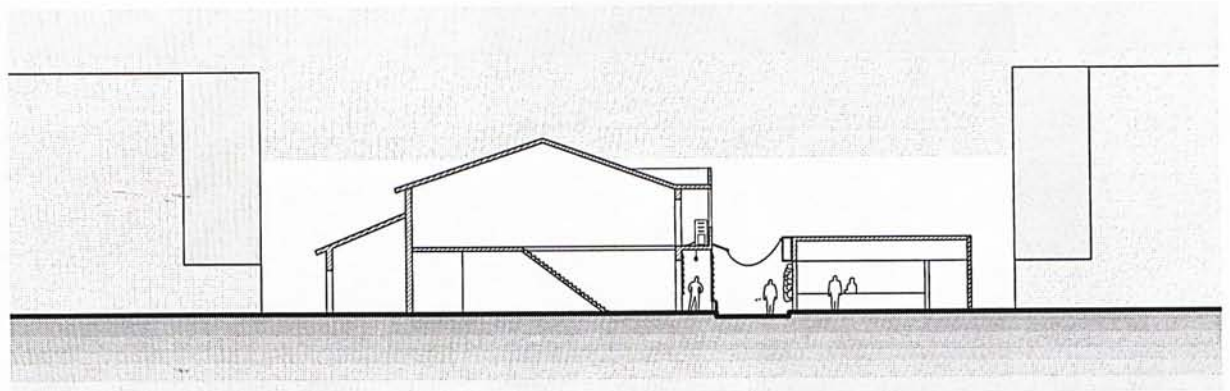
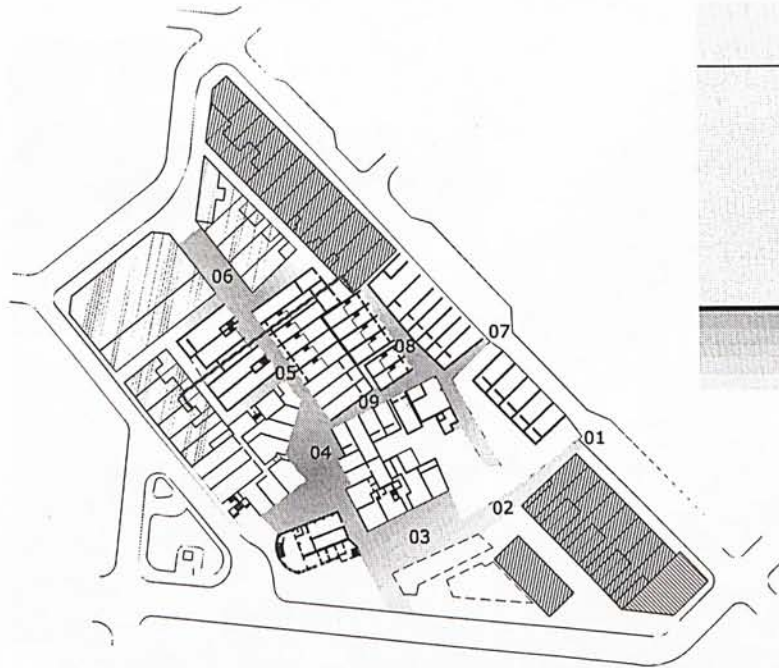
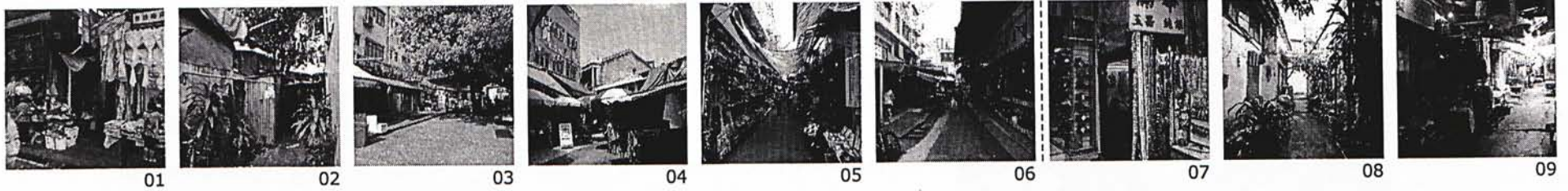
- The growth of SWH ceased.
- Peripheral development continue, which was mainly high rise housing.



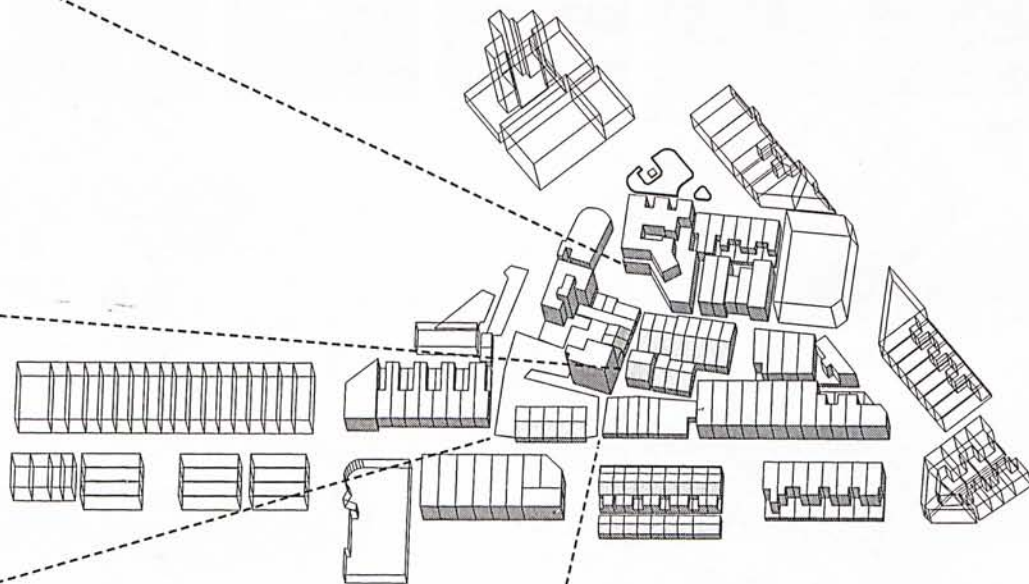
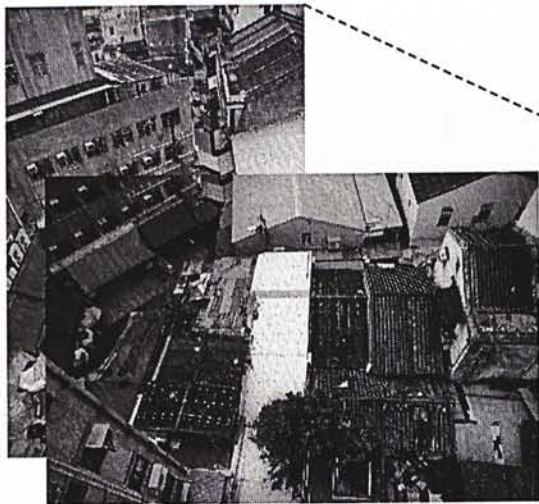
(-) / Markets  
/ Cinema  
/ Fire Station



## Market Place



The market place is located at the centre of SWH. It is indeed where the earliest settlements of SWH. This is where the history of SWH is embedded. The market consist of 2 alleys, intersecting near the former community centre. Nowadays the market street is still functioning, selling vegetables and some daily items.



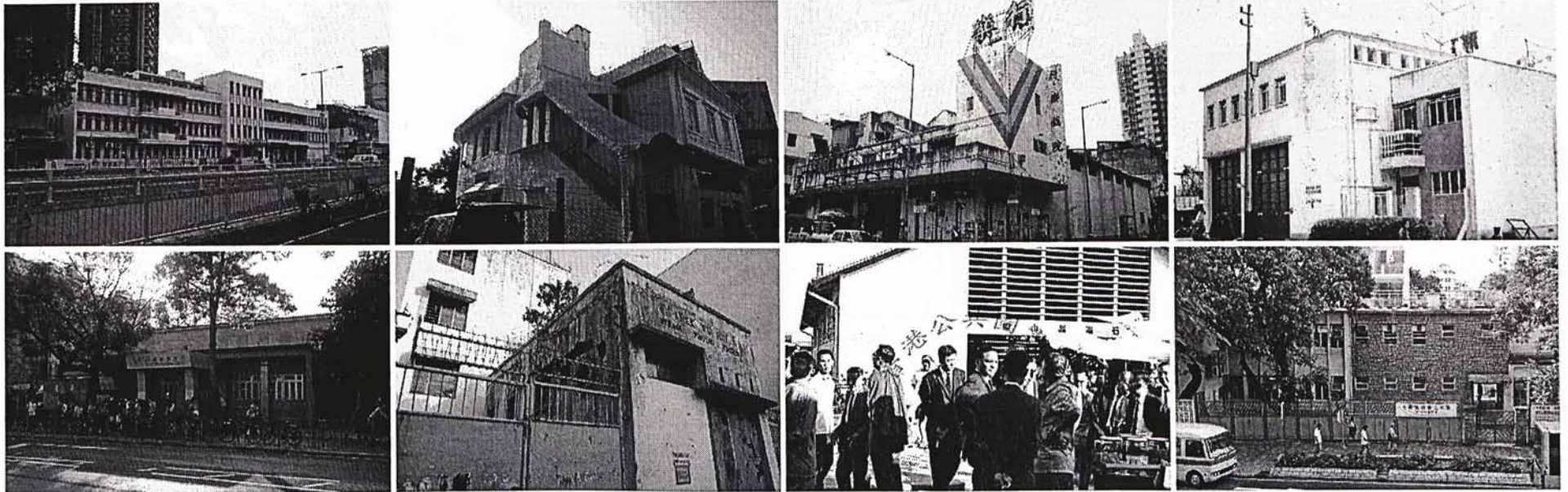


## Monuments

*"A monument's persistence or permanence is a result of **its capacity to constitute the city, its history and art, its being and memory.**"*

*"... the physical form of the past has assumed different functions and has continued to function, **conditioning the urban area** in which it stands and continuing to **constitute an important urban focus.**"*

*The Architecture of the City, Aldo Rossi*



## COMMUNITY CENTRE / PREWAR-

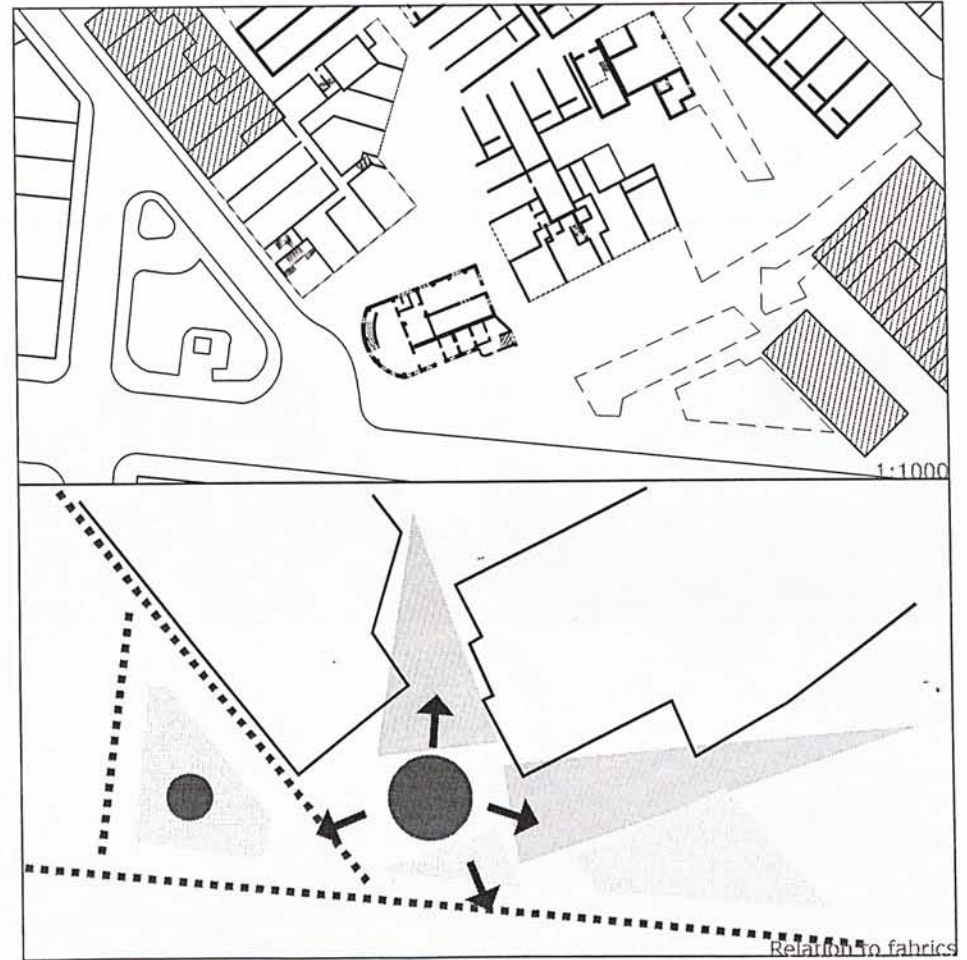


Current

This building was built in the pre war era, and was designed as hotel at the beginning. It later changed its function into a community centre, which also contain a public library. It is now used as a laboratory and office for the Food and Environmental Hygiene Department.

### RELATIONSHIP TO FABRICS

- / Focal Point
- / Point of attraction
- / Open to 4 sides





## SHEK WU HUI JOCKEY CLUB CLINIC / 1961-



1961

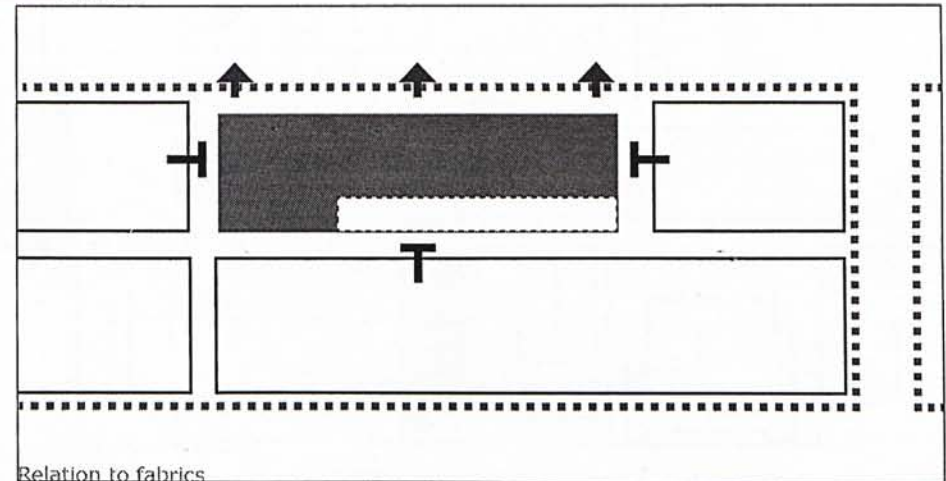
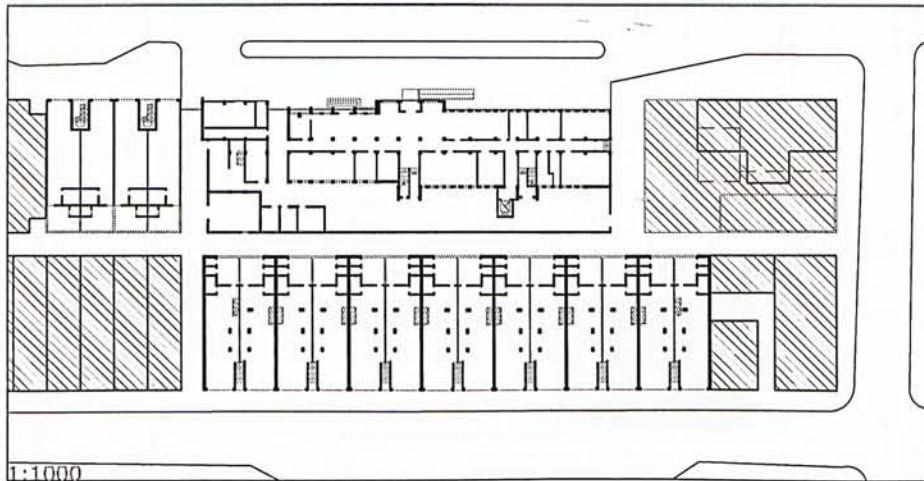


Current

The clinic was built in the early 60s, after the fire broke out in SWH. Together with the fire station (Demolished), Post Office, the clinic were the three earliest public building built, which marks the redevelopment of the SWH.

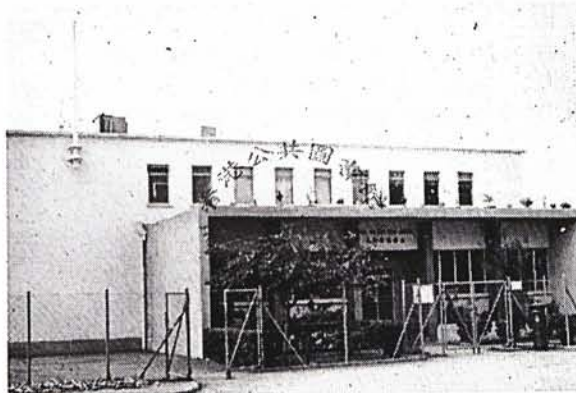
### RELATIONSHIP TO FABRICS

- / Infill Site
- / Open to one side
- / Located in town's edge



Relation to fabrics

# *SHEK WU HUI POST OFFICE / 1961-*



1961

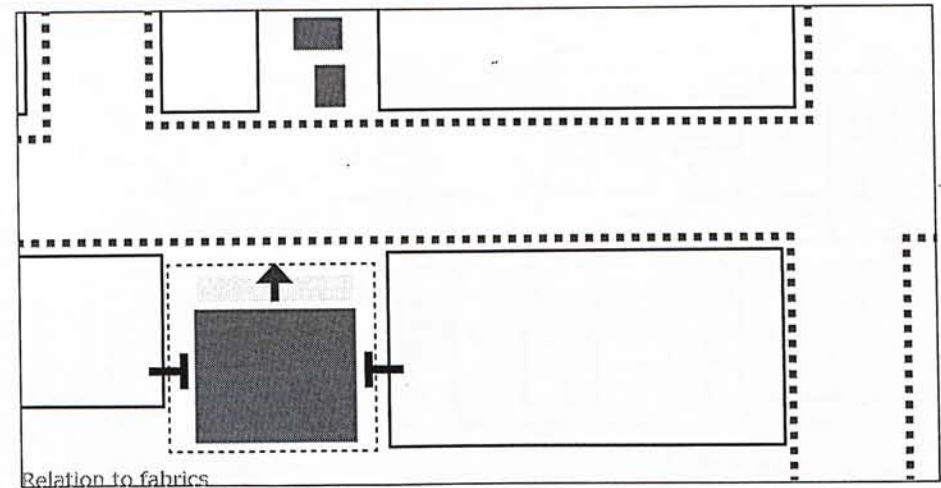
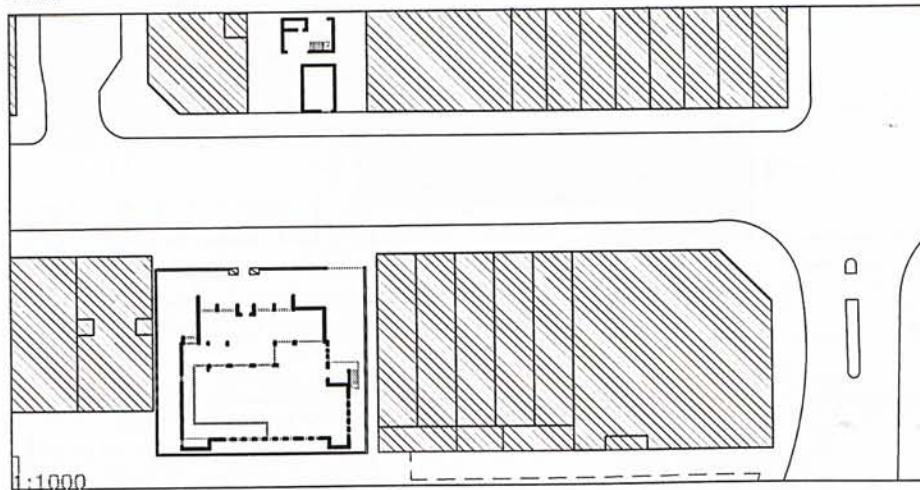


Current

It was built in the same time with the clinic and fire station, the first phase of public buildings. It locates along the San Fung Avenue, the main traf-  
fic artery of SWH. It is recently renovated.

## RELATIONSHIP TO FABRICS

- / Infill Site
- / Gated
- / Open to one side



Relation to fabrics



## HANG LOK CINEMA / DEMOLISHED / 1955-2002



Hang Lok Cinema



Market

## MARKET/ DEMOLISHED / 1961-2000

The cinema was built after the fire out broke, it was before a public outdoor theatre. It was the first cinema in the northern New Territories.

The Market was built in the 1961, and a market extension was built after the SWH redeveloped.

### RELATIONSHIP TO FABRICS

Markets

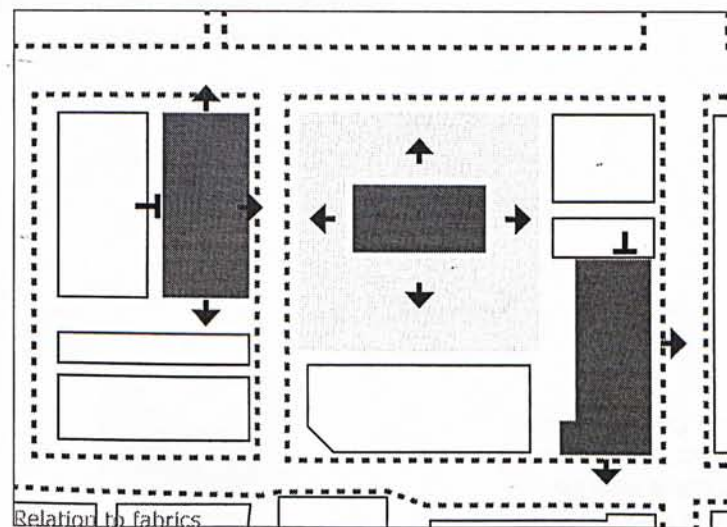
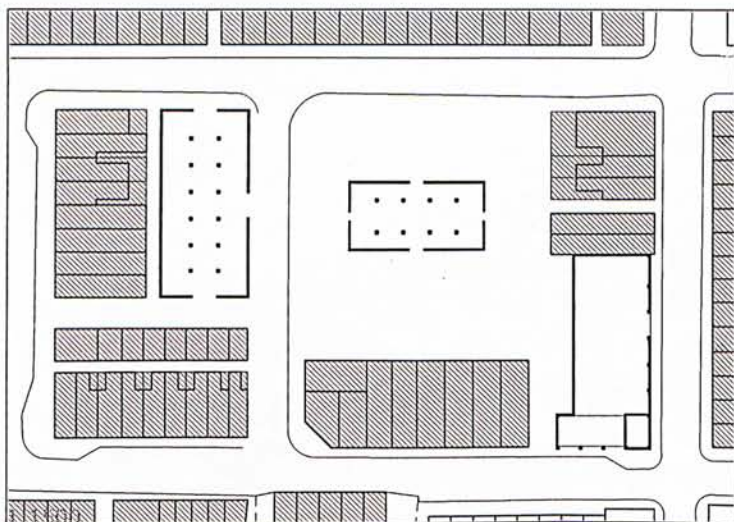
/ Open to 4 sides

/ space planned for outdoor hawking

Cinema

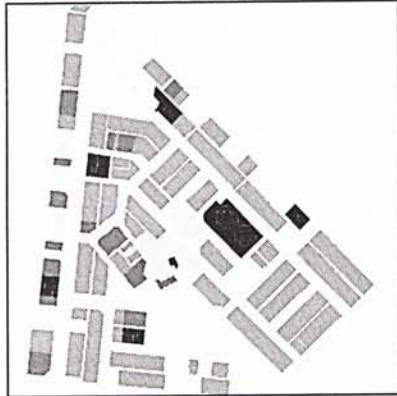
/ Corner site

/ Point of attraction

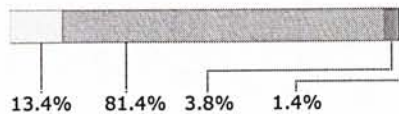


Relation to fabrics

## HOUSING TYPE



Distribution pattern



## 1<sup>ST</sup> GENERATION



Rural housing



## Housing Typo

### 2<sup>ND</sup> GENERATION



Shophouses

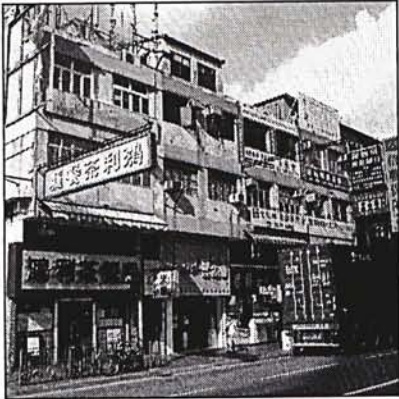


"It is intimately bound up with the **city's evolution and nature**, and is itself constituted of parts, which in turns **summarize the city's image**."  
- The Architecture of the City, Aldo Rossi

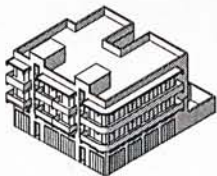


# Evolution in SWH

## 3<sup>RD</sup> GENERATION



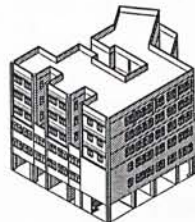
Tenement Houses



## 4<sup>TH</sup> GENERATION



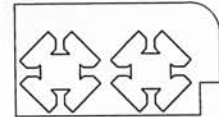
Tenement Houses

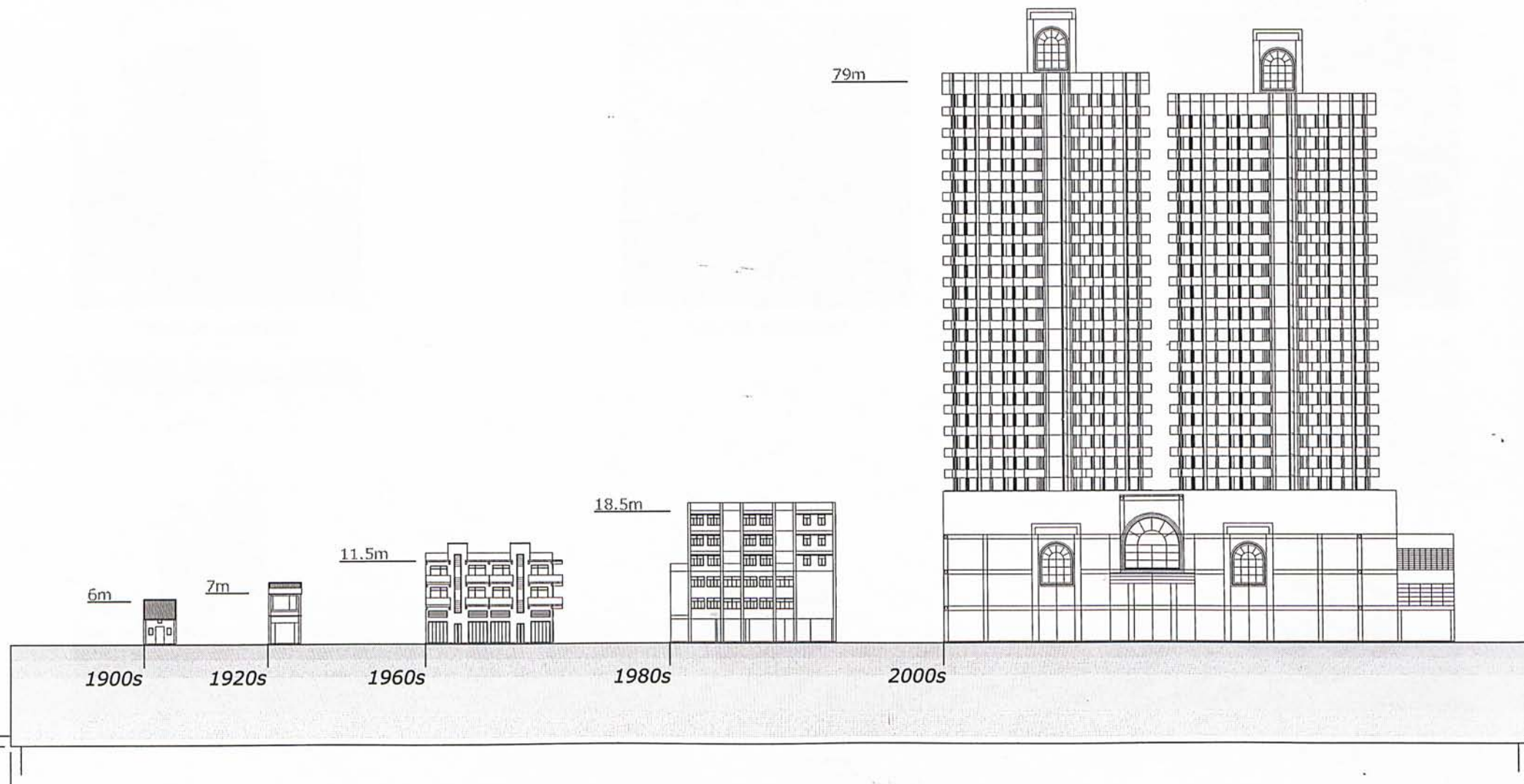


## 5<sup>TH</sup> GENERATION



Residential Tower







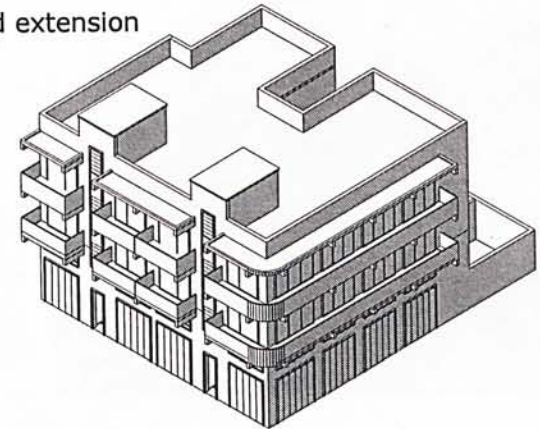
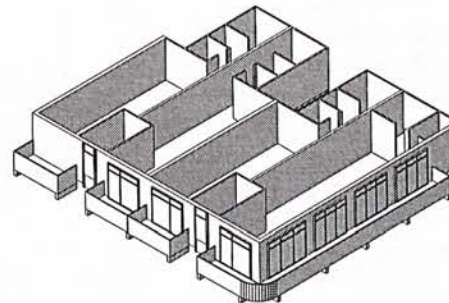
## FU HING STREET 2-8



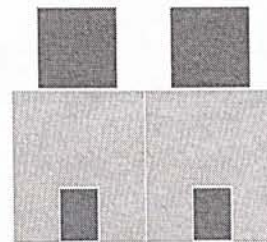
Type: Res + Com  
 Year: 1959  
 Lot Area: 380.34 sqm  
 No. Flr: 3  
 Plot Ratio: 1.8  
 No. Unit: 8  
 Res Unit Area:  
 1 / 60.6 + 24.7 sqm  
 2 / 51.2 + 4.7sqm

### CHARACTERISTICS

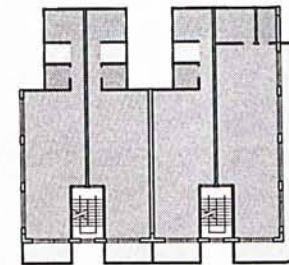
- / Clear, simple layout
- / Generalized
- / Maximum flexibility for addition and extension



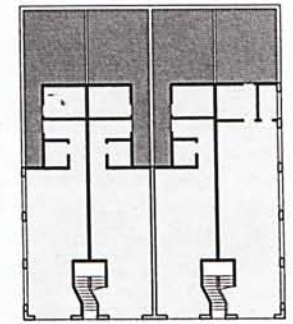
Program distribution



Living area and services



Typical Floor



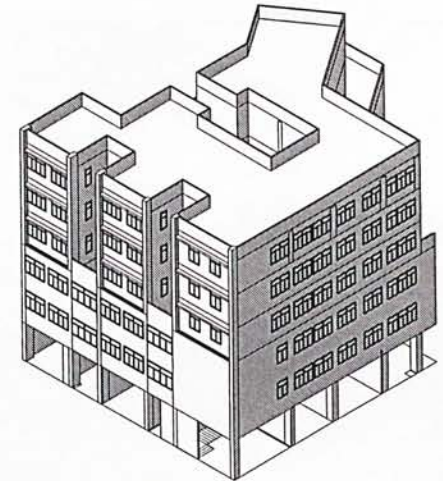
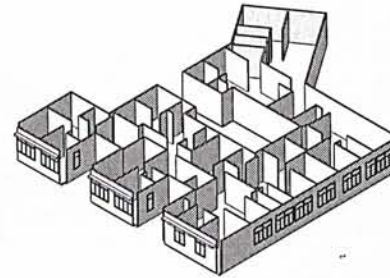
Ground Floor 1:500

# *SAN TSOI STREET 23-33 / 24-34*

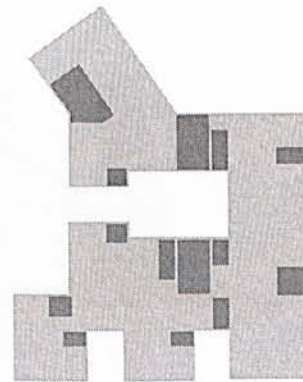
Type: Res + Com  
 Year: 1984  
 Lot Area: 558.95 sqm  
 No. Flr: 6  
 Plot Ratio: 4.3  
 No. Unit: 24  
 Res Unit Area:  
 1 / 35.6 sqm  
 2 / 24.7 sqm  
 3 / 30.4 sqm  
 4 / 34.5 sqm  
 5 / 32.5 sqm  
 6 / 28.9 sqm  
 7 / 30.4 sqm  
 8 / 36.4 sqm  
 Average / 31.7 sqm

## *CHARACTERISTICS*

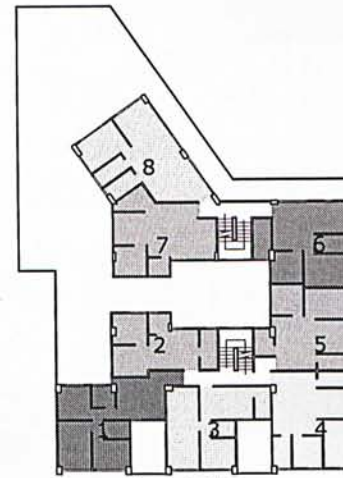
/ Less clear layout  
 / Scattered services  
 / Mid flexibility



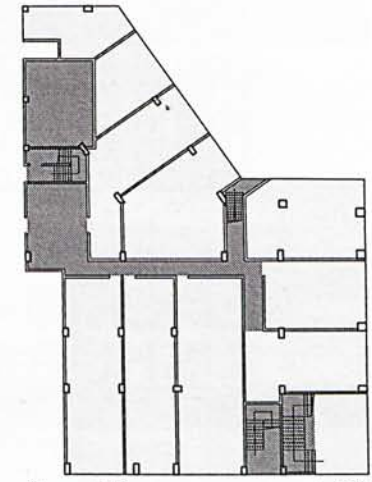
Program distribution



Living area and services



Typical Floor



Ground Floor

1:500



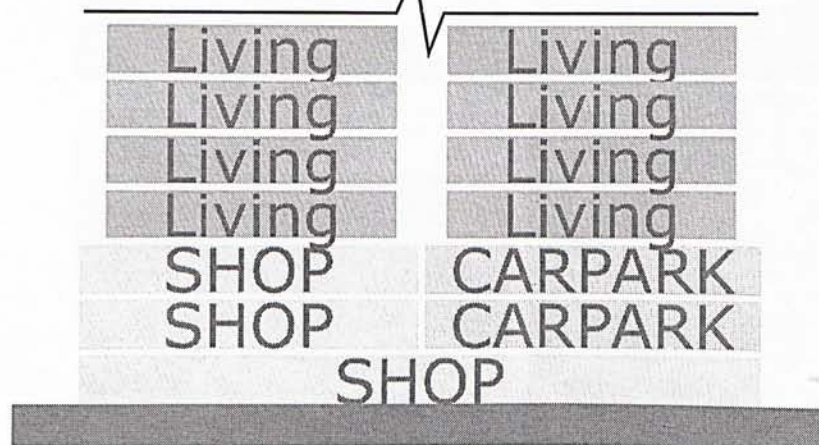
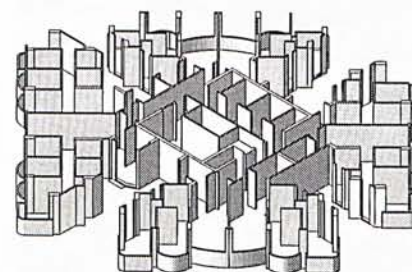


## SAN SHING AVENUE 88 / ROYAL JUBLIEE TOWER

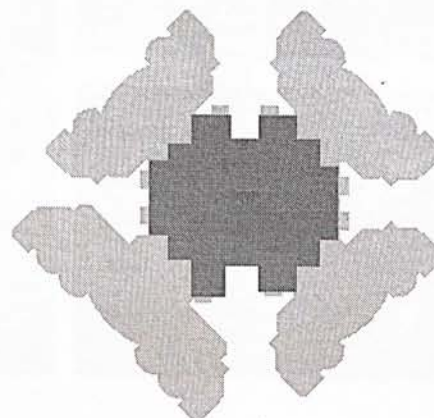
Type: Res + Com  
 Year: 2001  
 Lot Area: 2621 sqm  
 No. Flr: 22 / 23  
 Plot Ratio: 5  
 No. Unit: 131+139  
 Res Unit Area:  
 1 / 43.2 sqm  
 2 / 43.6 sqm  
 3 / 32.0 sqm  
 4 / 31.8 sqm  
 5 / 32.5 sqm  
 6 / 31.6 sqm  
 7 / 31.9 sqm  
 8 / 31.9 sqm  
 Average / 34.8 sqm

### CHARACTERISTICS

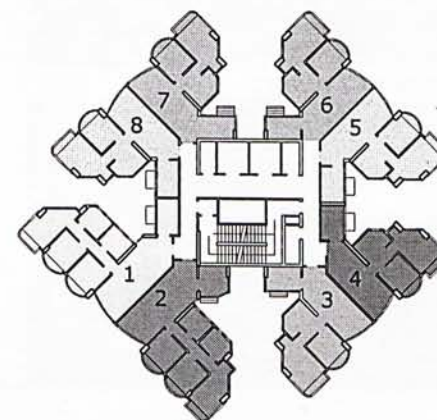
/ Central core  
 / Specialized Layout  
 / Low flexibility



Program distribution



Living area and services



Typical Floor

1:500

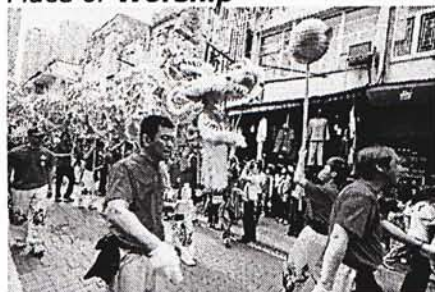


## Event Space

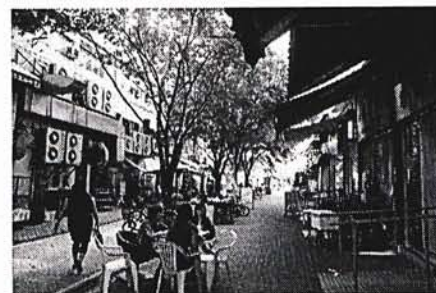
Place of **Celebration**



Place of **Worship**



Place of **Leisure**



Place of **Shopping**

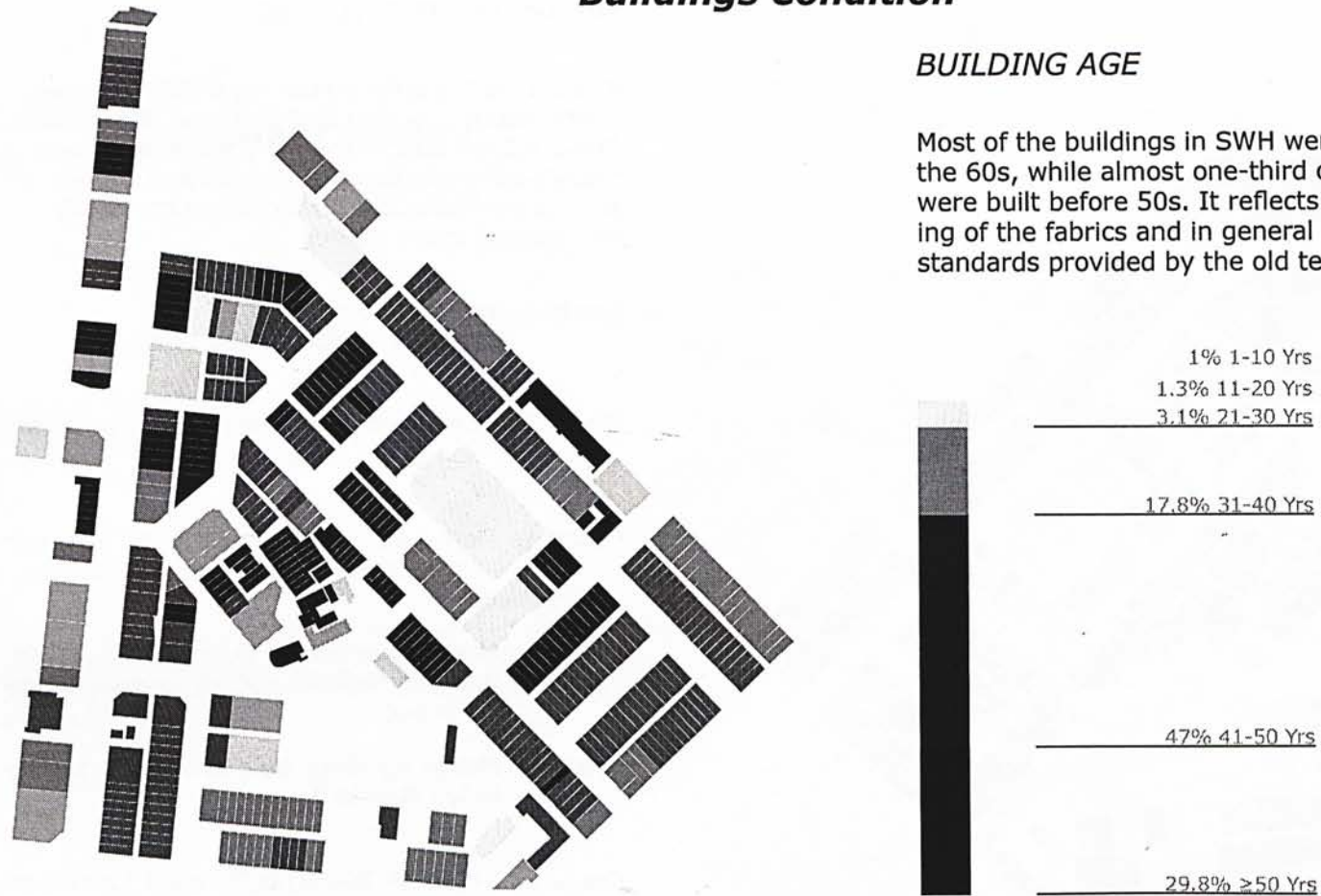




## ***Buildings Condition***

### ***BUILDING AGE***

Most of the buildings in SWH were built during the 60s, while almost one-third of the buildings were built before 50s. It reflects serious aging of the fabrics and in general outdated living standards provided by the old tenement houses.

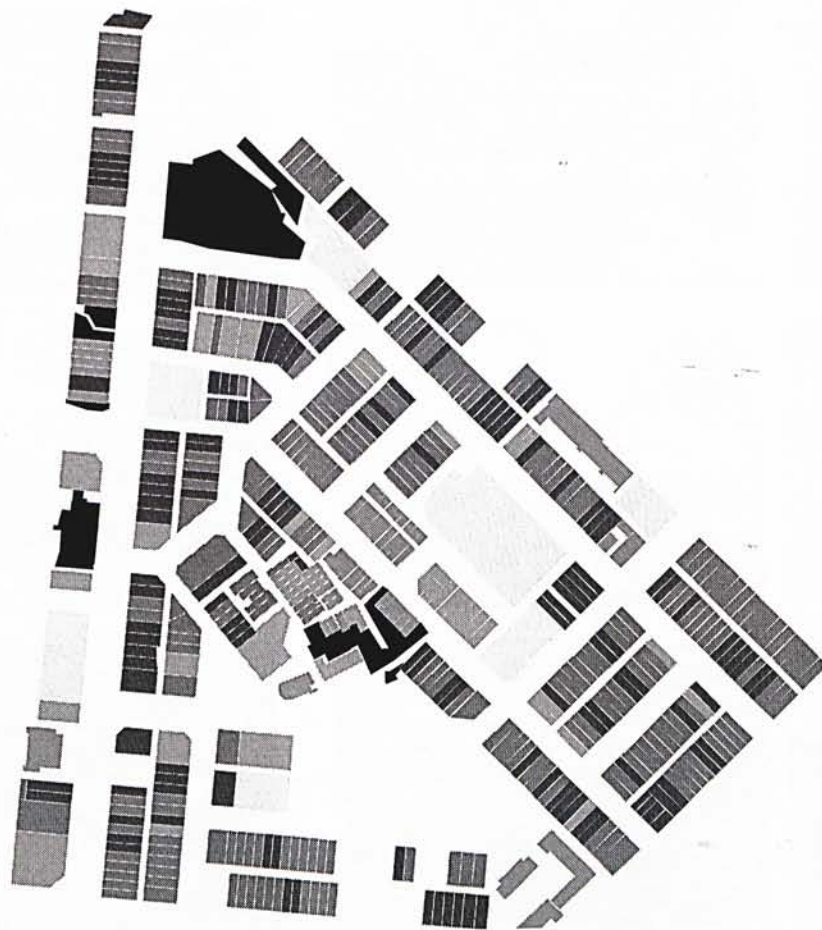


## ***Buildings Condition***

### ***DILAPIDATED BUILDING***

This record the condition of the buildings based on its health condition and provision of facilities. Some houses built in the old days do not meet today's minimum living standards and showed serious deterioration. Buildings are assessed and allotted into 6 grades.

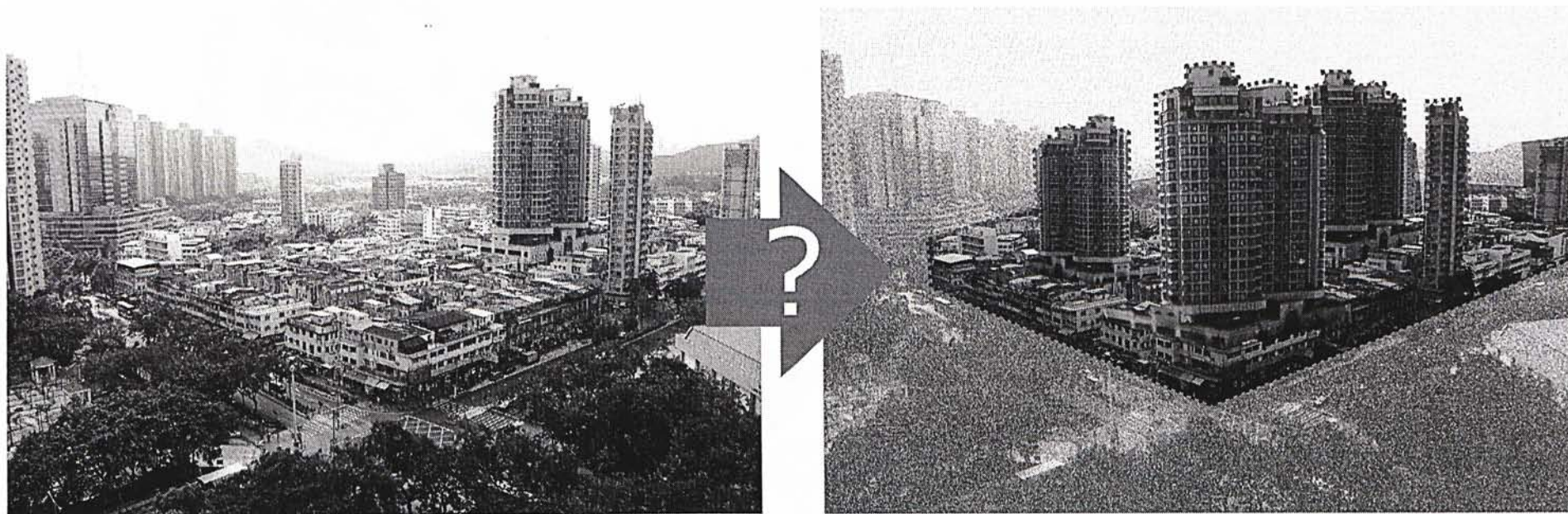
- Grade 1 Historical building  
preserve, renovate and reuse
- Grade 2 Mostly temporary structure in poor condition,  
need clearance and repair
- Grade 3 Mostly shophouses built in the 50s, without  
lifts, facilities not up-to-date, seriously worn-out
- Grade 4 Mostly shophouses built in the 50s-60s, with-  
out lifts, facilities not up-to-date, moderately  
worn-out
- Grade 5 Mostly buildings built in the 80s, facility meet  
today standard
- Grade 6 Recently (2000s) built, meet today living standard





## **Preliminary Design**


**What kind of future will SWH look like?**

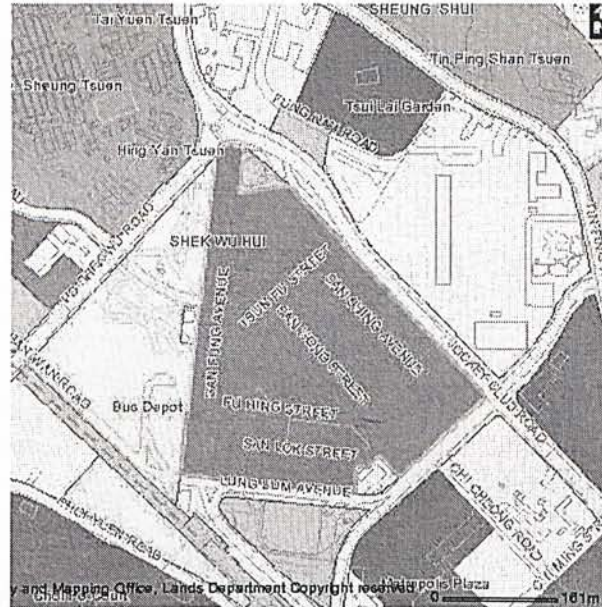




### **Existing Density and Government OZP**

## GOVERNMENT DEVELOPMENT SCHEDULE

DZP Zoning	
<b>AGR</b>	Agriculture
<b>C/R</b>	Commercial / Residential
<b>CDA</b>	Comprehensive Development Area
<b>G/IC</b>	Government / Institution / Community
<b>GB</b>	Green Belt
<b>I</b>	Industrial
<b>O</b>	Open Space
<b>OS</b>	Open Storage
<b>OU</b>	Other Specified Uses
<b>R(A)</b>	Residential (Group A)
<b>R(B)</b>	Residential (Group B)
<b>R(C)</b>	Residential (Group C)
<b>REC</b>	Recreation
<b>U</b>	Undetermined
<b>V</b>	Village Type Development
	Amendment Item



EXISTING DENSITY

Commercial / Residential

Max Plot Ratio / GFA

Max Building Height

Site area <340m<sup>2</sup>

Domestic plot ratio of 3.9  
Non-domestic plot ratio of 5.7

20 metres

Site area >340m<sup>2</sup>

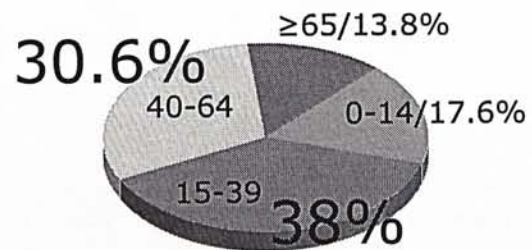
Domestic plot ratio of 5.0  
Non-domestic plot ratio of 9.5

81 metres

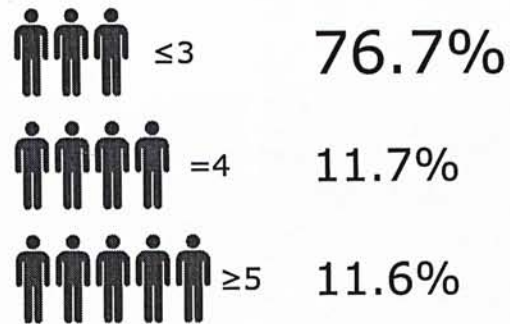
Site area / 119930m<sup>2</sup>


## SWH Demographic Data (2006 By-census, HK Gov)

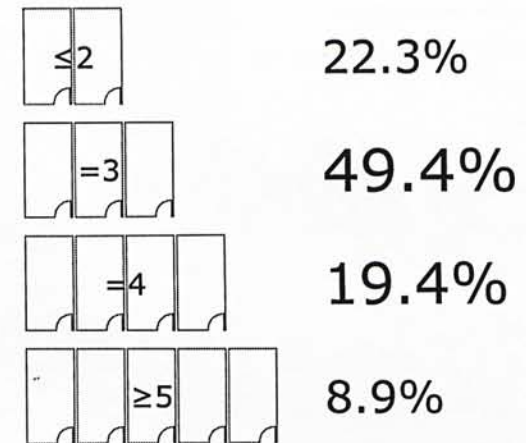
Population / 5524  
 Number of family / 1952  
 Housing type / Privately own / 1839 units  
 Public housing / 0

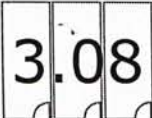


Age Group



Average Family size =  2.8



Average Room per Family =  3.08



## **Redevelopment Strategy**

**ZONING** / identifying different zones according to

**Historical Importance;**  
**Areas Characterist;**  
**Areas Activeness;**  
**Communal Activities and**  
**Building Group Ages**

**CORE AREA** / C1, C2

The core area is island defined by the roads: San Hong Street, Fu Hing Street, San Tsoi Street and Tsun Fu Street. It is the oldest area of SWH, where the oldest buildings are concentrated and preserved. This is also where the market street located (C1).

### DESIGN AIM

- 1 / Tidying up slums and temporary structure
- 2 / Preserve the Historic core and adding new programs
- 3 / Restore and reuse buildings with historical significant

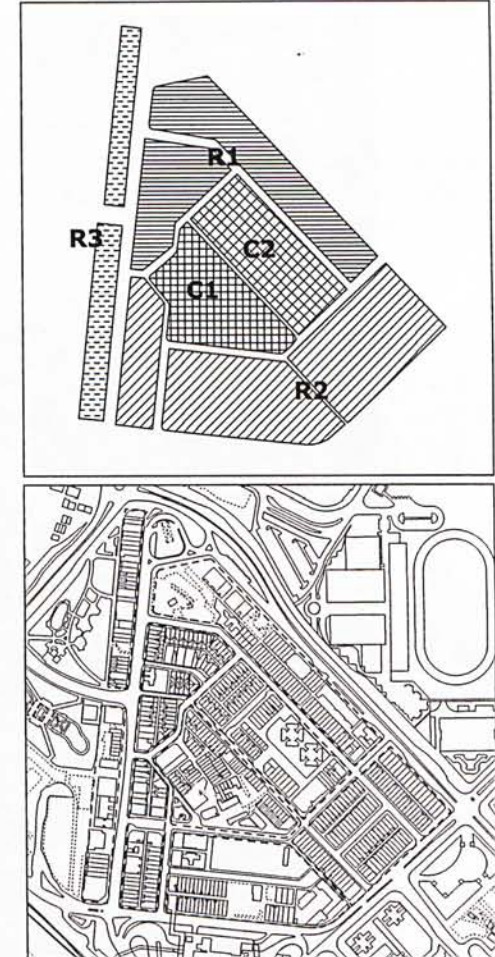
**RESIDENTIAL AREA** / R1,R2,R3

**3 zones are identified by their nature, respectively**

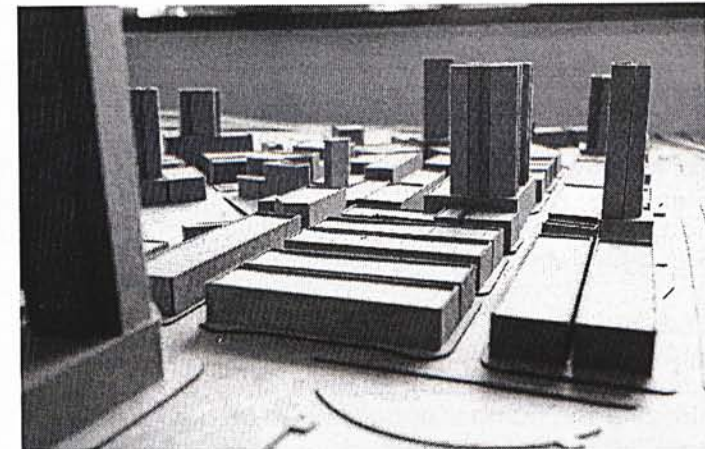
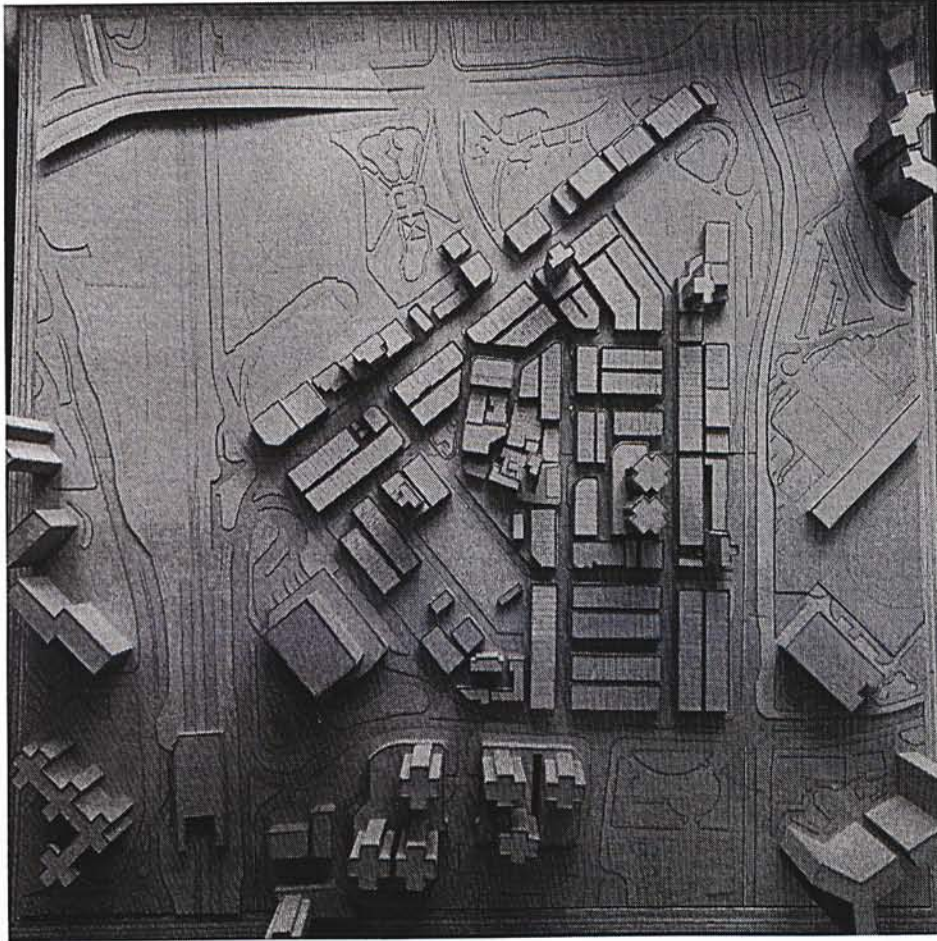
**R1 / San Fung Avenue;**  
**R2 / Lung Sum Avenue and**  
**R3 / San Shing Avenue**

### DESIGN AIM

- 1 / Improving the living standard of the local community
- 2 / Make good use of existing tenement houses structure
- 3 / Minimizing the number of building to be demolish
- 4 / Preventing Gentrification

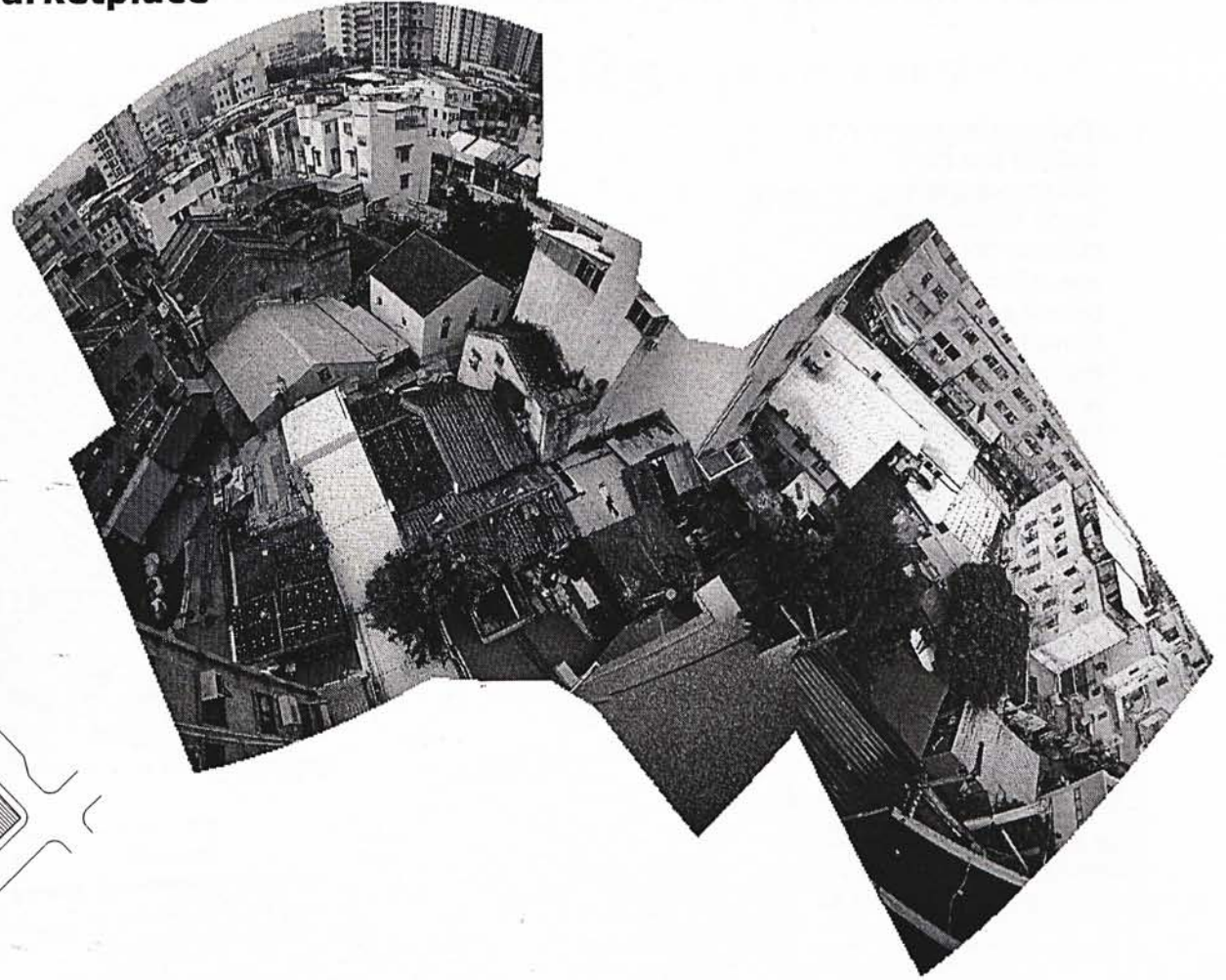


***Model- Site Existing***





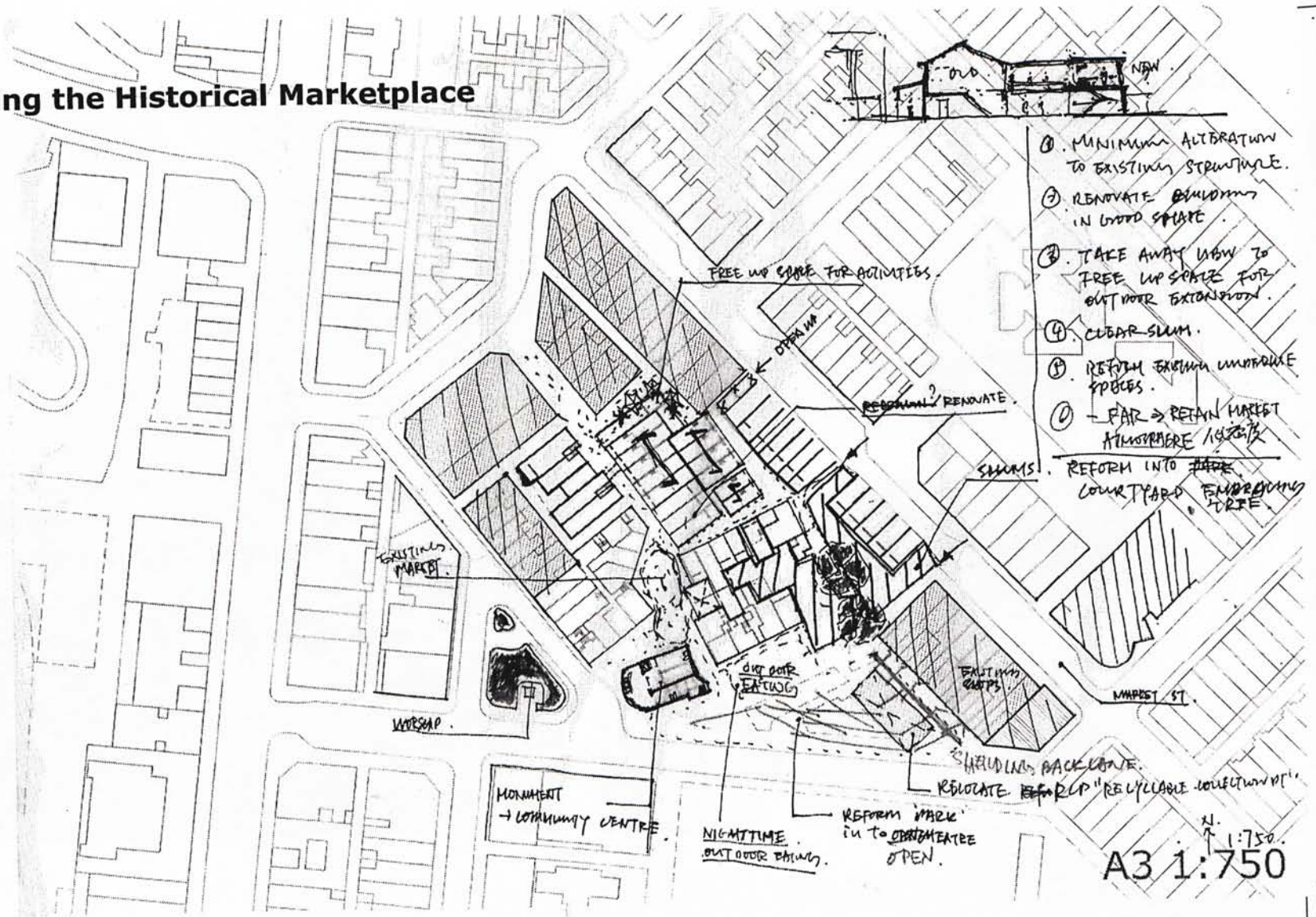
## Design I Renovating the Historical Marketplace





## Design I Renovating the Historical Marketplace

This market was built at the beginning of SWH, some vernacular Chinese houses are still maintained and use nowadays. The main strategy is to keep its original layout, renovated the dilapidated structure and open up some pocket spaces so that the complex can sustain by its own energy.





## Case Study | Renewal Strategy | Singapore

**INTENTIONS** | To retain the original ambience of the area  
To control expansion and avoid unflavourable building works  
To upgrade and restore the existing houses to meet modern living standards

### BY AREA AND BUILDING TYPOLOGIES

**HISTORICAL DISTRICTS**  
/ **strictest form of conservation**  
/ **entire building** is to be conserved.

**RESIDENTIAL HISTORICAL DISTRICTS**  
/ smaller areas mainly for **residential** use.  
/ **extension at the rear** lower than the main roof is permitted

**SECONDARY SETTLEMENTS**  
/ **streetscape basis** as the conservation buildings are adjacent to new developments  
/ **conserve the entire building** or  
/ **new rear extension** up to the maximum allowable height of that area

**BUNGALOWS**  
/ on a **highly selective basis**  
/ only the **main house needs to be kept**  
/ outhouse can be demolished for new extensions  
/ **large sites can be subdivided** for additional new developments  
/ can be used for residential purpose or as a clubhouse to serve the development.

### ENVELOPE CONTROL GUIDELINES

### GOVERNMENT ASSISTANCE

## CONSERVATION PRINCIPLES

**3Rs-** **MAXIMUM RETENTION**

**SENSITIVE RESTORATION**

**CAREFUL REPAIR**

### Key Conservation Areas

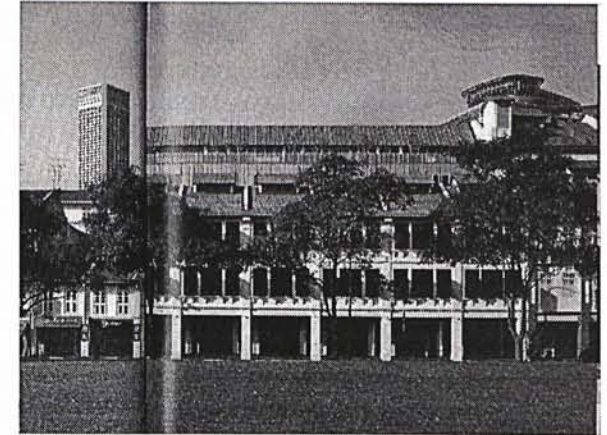


## Case Study | Renewal Example | Singapore

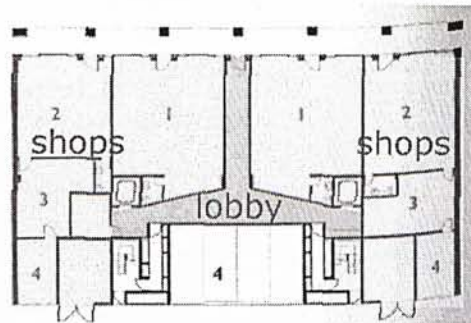
TAN QUEE LAN SUITES | WOHA ARCHITECTS | SINGAPORE  
RESIDENTIAL | COMERCIAL | OFFICE

SITE AREA : 815.9 M<sup>2</sup>

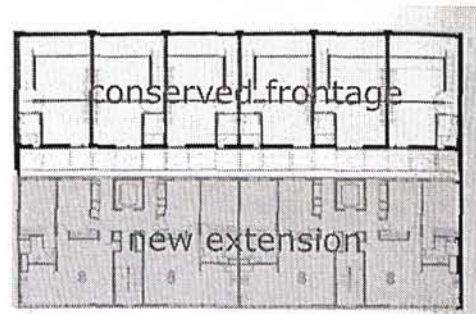
BUILDING AREA : 3211.7 M<sup>2</sup>



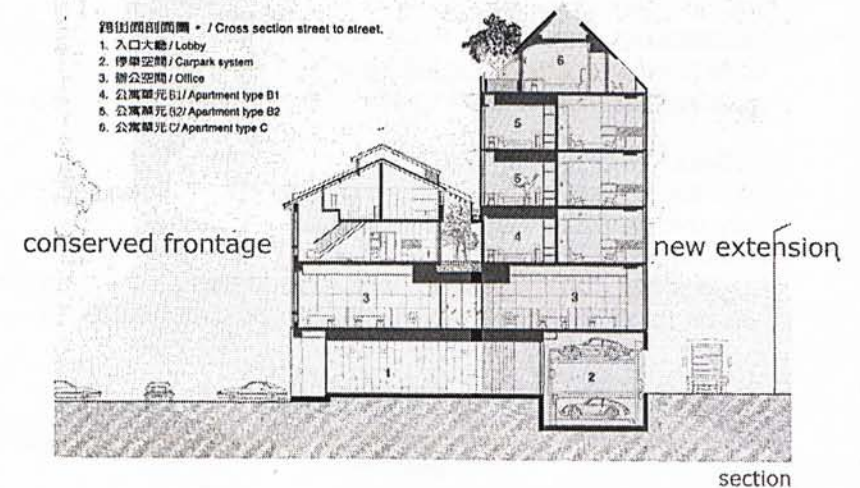
Elevation view



G/F plan



3/F plan



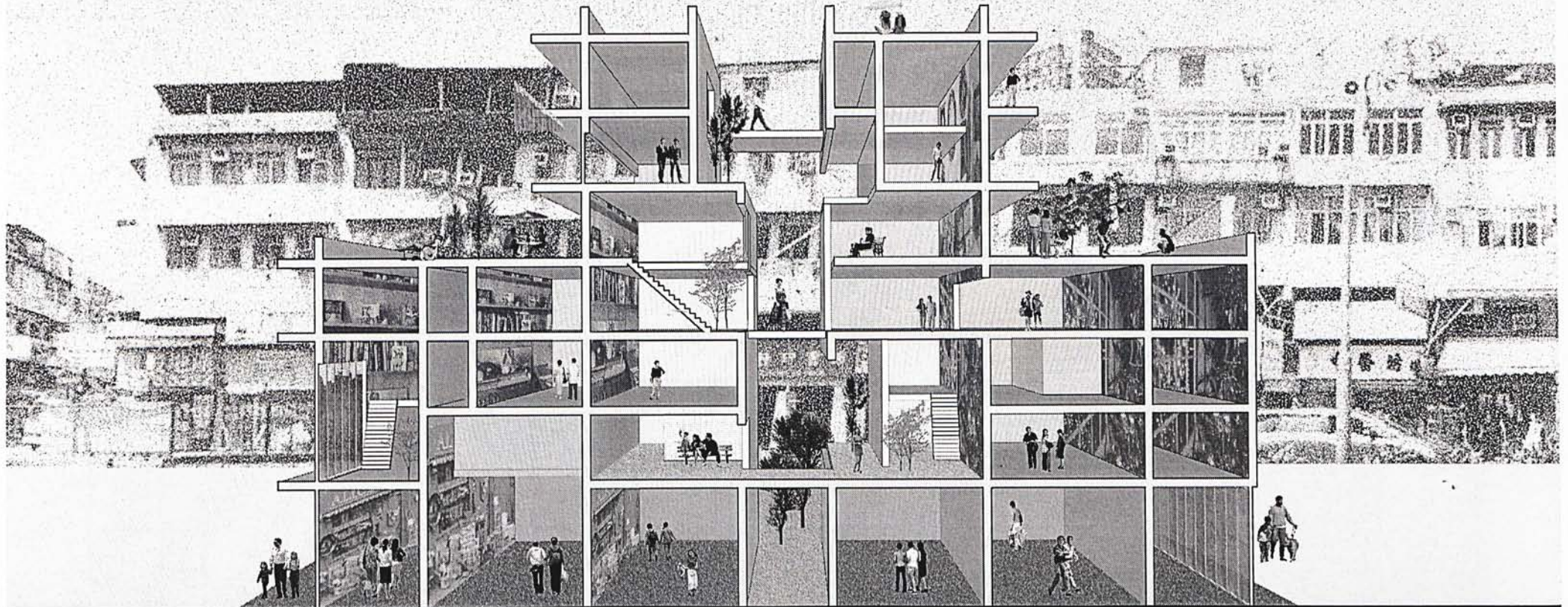
section



**Thesis Design Report** 100510

Ted, Hung Chun  
s08068730

## Design Strategies | Conceptual Diagram | SWH







**Design Aim**

*Sustainability of local community*



*Retain and inherit the culture and history*



*Conservation of local life style and space characteristics*

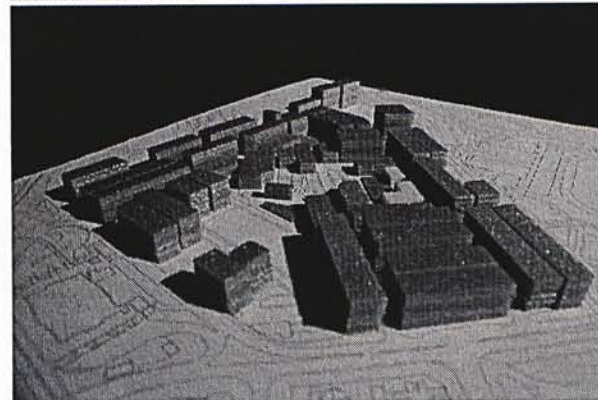
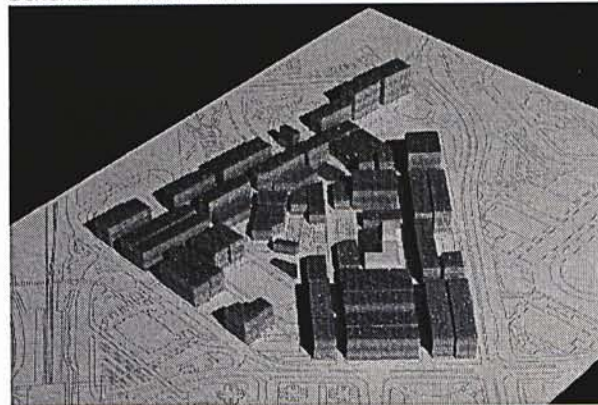


## Envelop Control Study

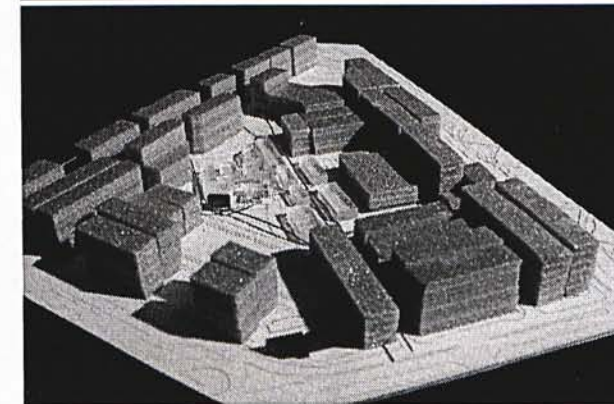
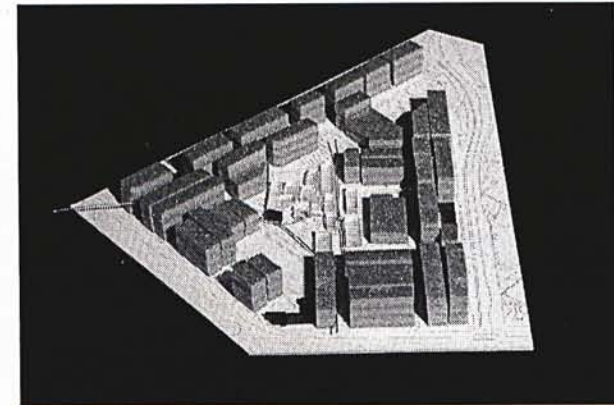
The overall urban mass is studied. Using the government height restriction as a starting point (20m), 2 schemes were ( $H=20\text{m}$  and  $H=40\text{m}$ ) carried out to study the possible future density of the townscape.

The overall site height limit is set to be 22m, which can allow new development of 5 storeys to be built in the centre area, while the outer peripheral of SWH can allow higher buildings.

Scheme 1- max  $H=20\text{m}$



Scheme 2 - Max  $H=40\text{m}$





## Site Density

80% of the buildings in SWH are 3 storeys tenement houses. The intact townscape embedded the trace of life and reflect the life style of the traditional chinese villages.

Hence it is important to control the plot ratio of the redevelopment as to keep the uniformity of the townscape.

5.5

7.8

6.0

4.3

6.3

1.9

2.0

2.1

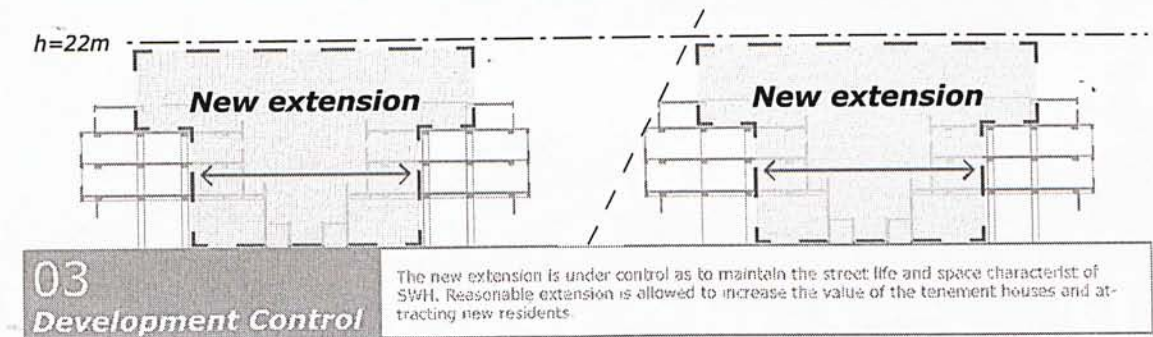
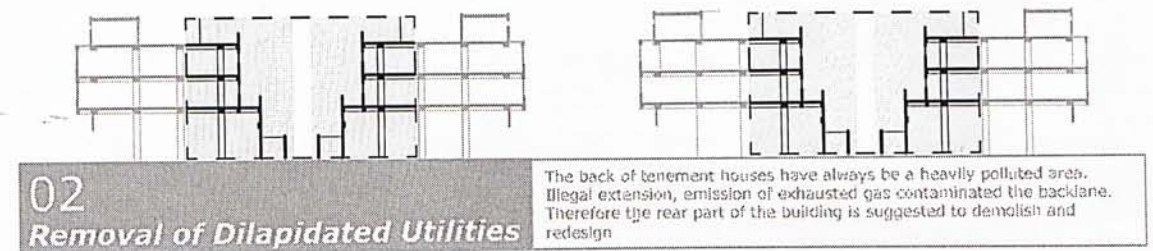
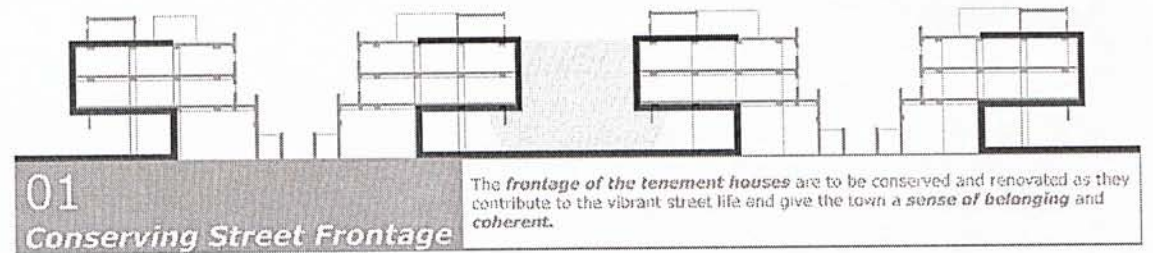
2.4

***Overall Site Plot Ratio = 2.43***



## Conservation Strategy - Partial Conservation

Total reconstruction destroy the community bonding in the town. The large number of tenement houses in SWH are seen as a capital and opportunity to renew and rehabilitate here rather than a aging fabric. Hence a partial conservation strategy is suggested.





## Pilot Site - Defining Area of Alteration



Pilot site

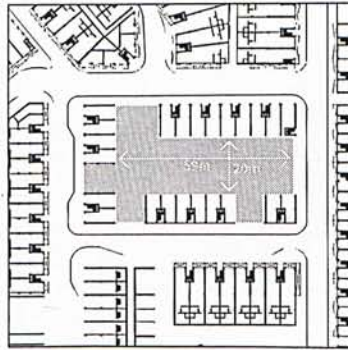
0 100m



Conserved Frontage



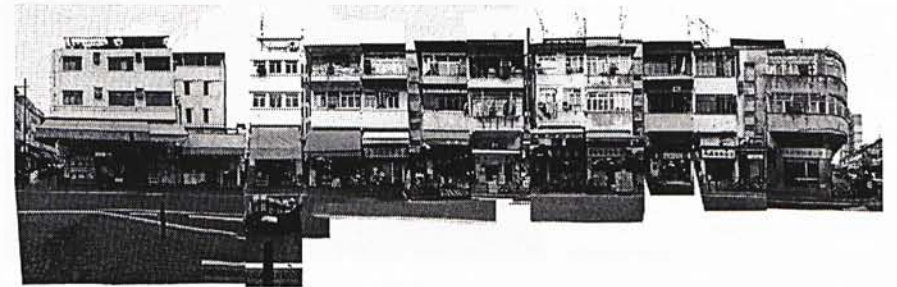
Removal of Dilapidated Area



Main Surgery Area

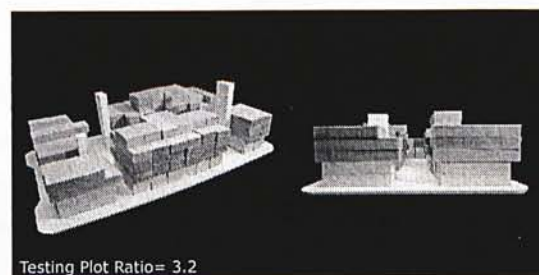
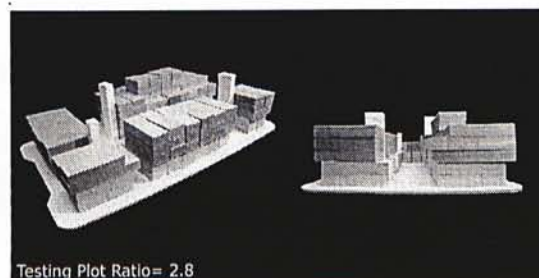
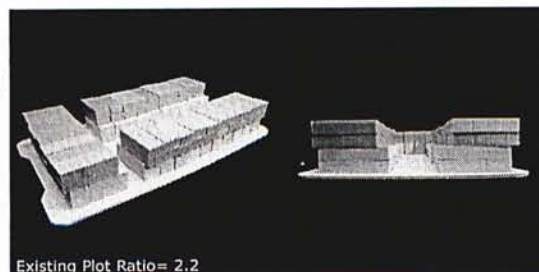
0 25m

## Existing Site Condition



## Testing Design Plot ratio

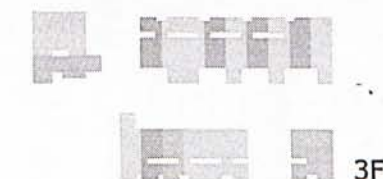
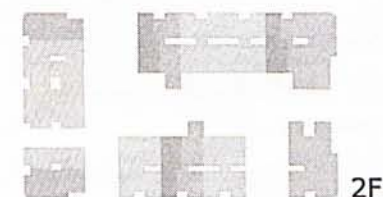
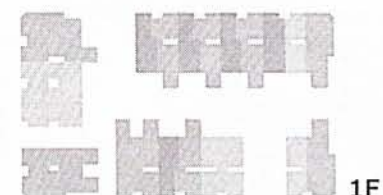
The existing plot ratio in SWH ranged from 1.9 to 2.5. Without affecting the overall townscape, the design plot ratio is designed to be 3.2.



## Distribution Scenarios

The units were distributed in a way they form a optimum distance from each other and different kinds of pocket spaces.

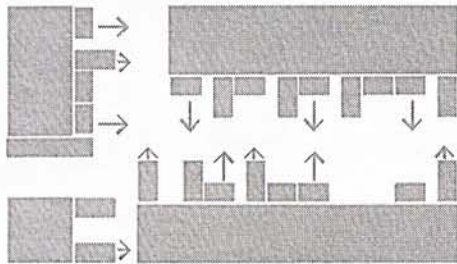
Since the structure is simple post-and-beam, the units can easily rearrange or combine when the house owner needs change over time.



3-BEDROOM  
2-BEDROOM  
1-BEDROOM



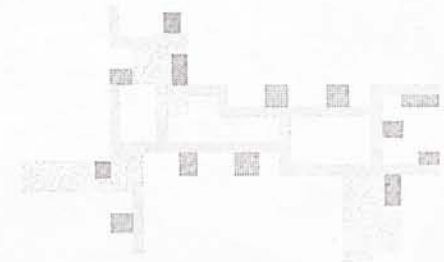
## Design Strategies



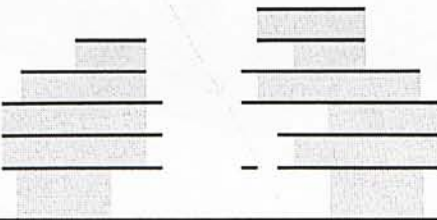
Reconfiguration of Units



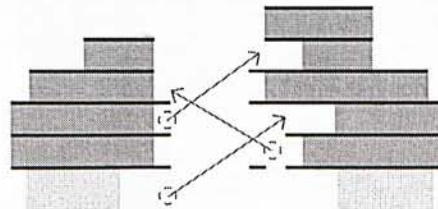
Insertion of Lightwell



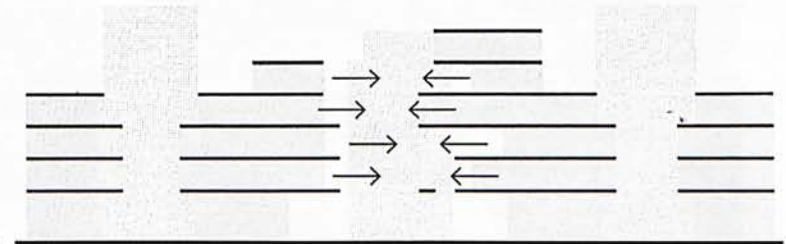
Circulation and Semi Private Space



Sunlight Consideration

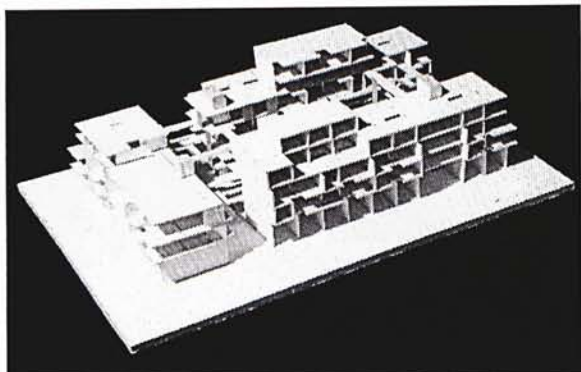


Multiple Interaction

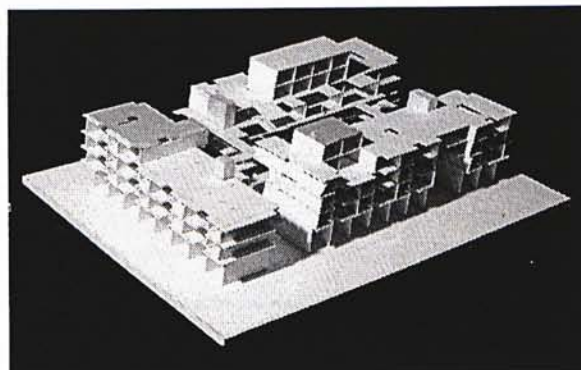
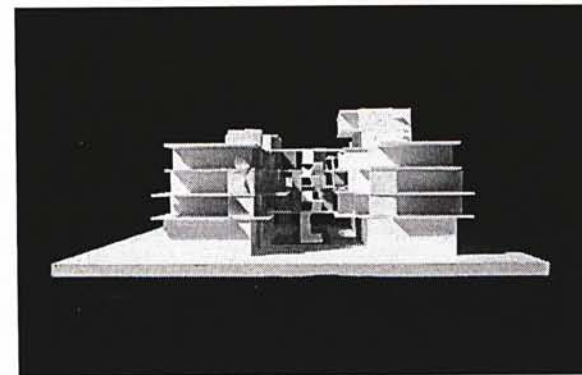
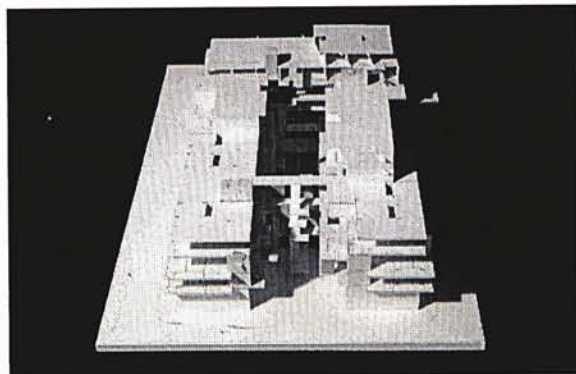


Public/Communal/Private

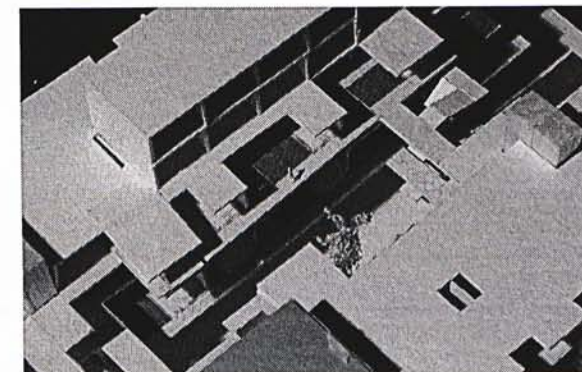
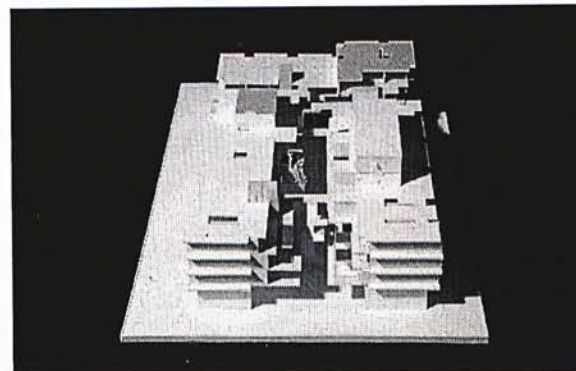
## Design I Study Model



Scheme 1

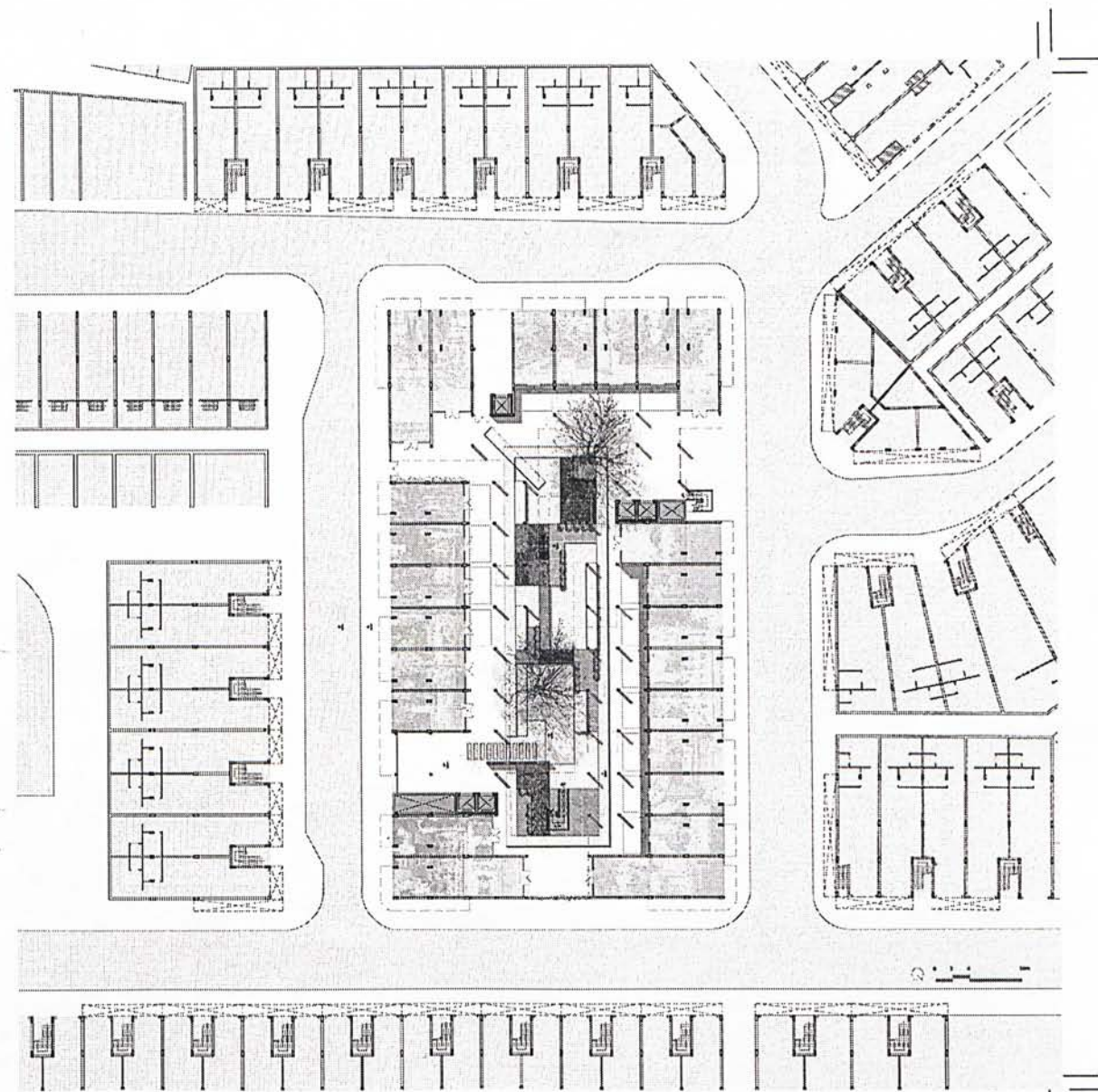


Scheme 2

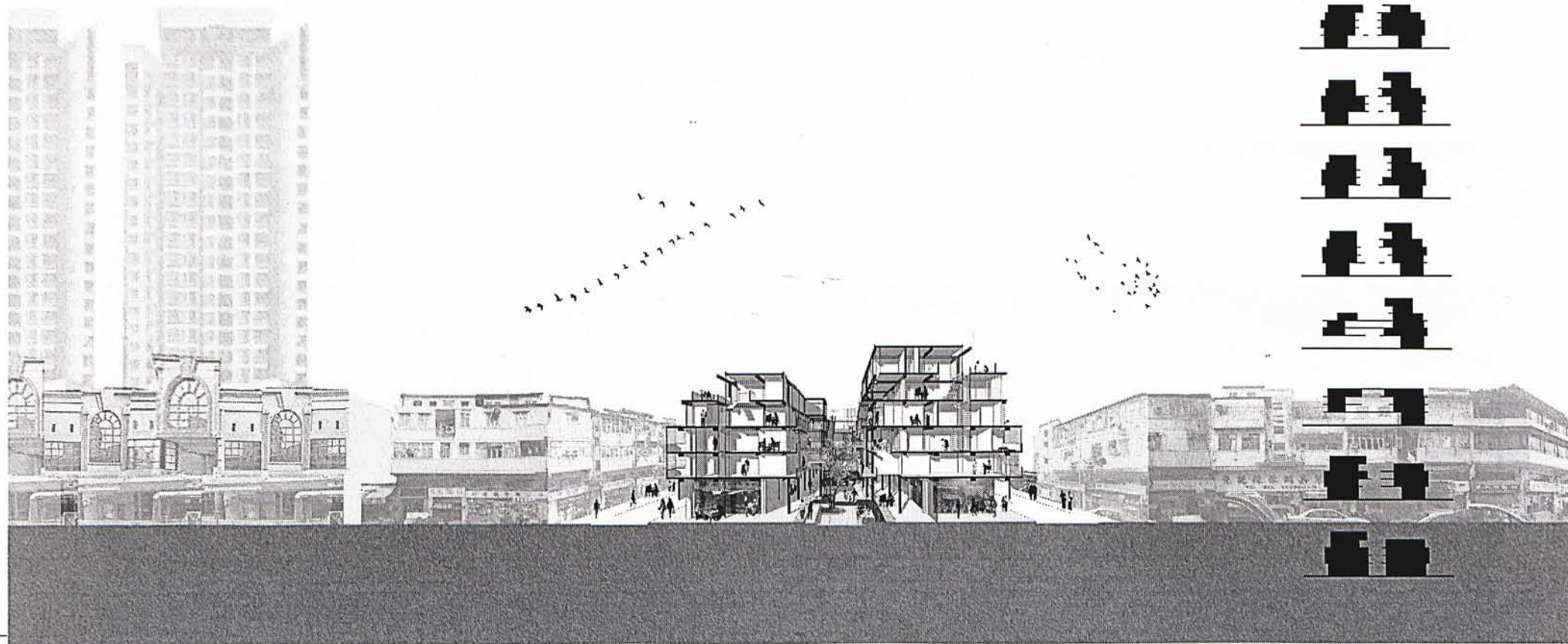




## Design I Ground Plan

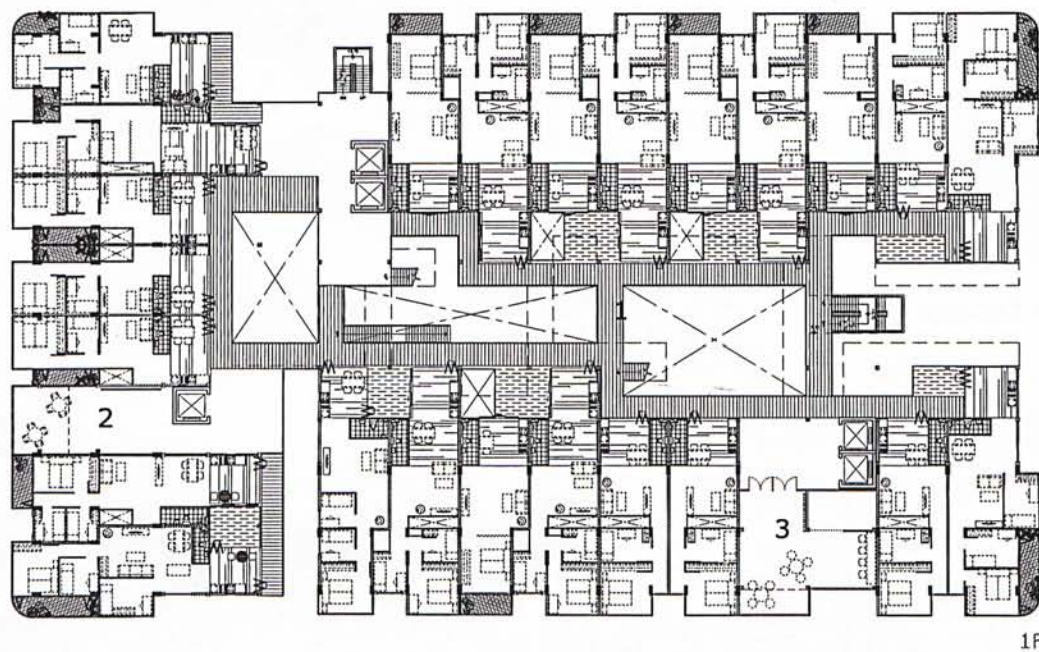


## Design I Sections

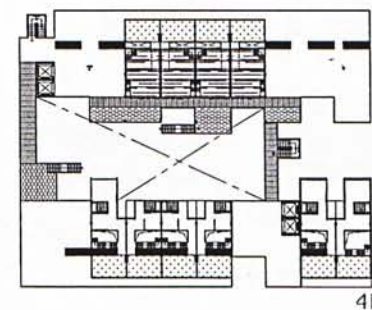
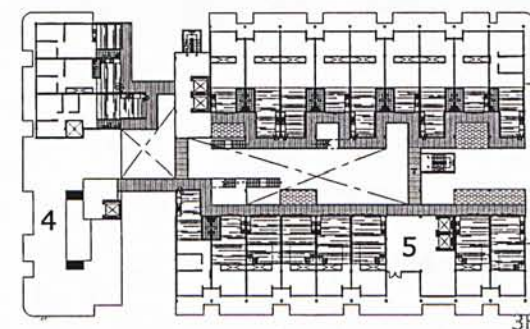
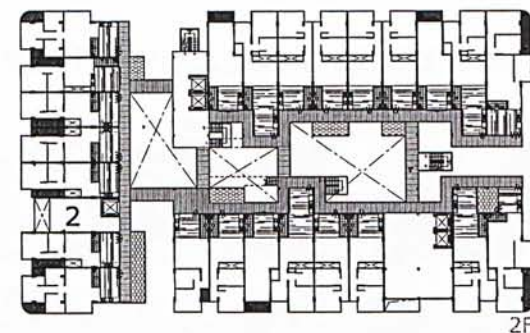




## Design I Plan



- 1 - communal courtyard
- 2 - reading area
- 3 - community centre
- 4 - green deck
- 5 - day-care centre



# Design I Units Typology I Recapturing the Essence of Communal Living

Communal Living in Traditional Chinese Community

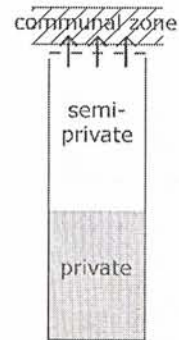


Shanghai LiLong 里弄



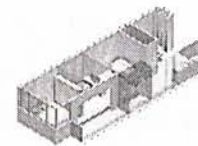
SWH Market Street

Sharing of communal space

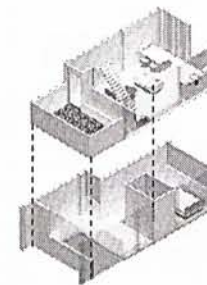


Public Market street  
Unit Concept

2b



2c



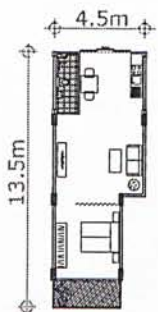
3b



## Typology Design

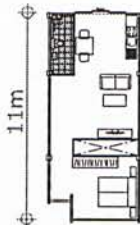
1-bedroom

1a



Area = 54 sqm

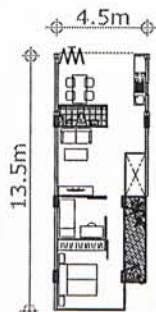
1b



45.8 sqm

2-bedroom

2a



57.8 sqm

2b



54 sqm

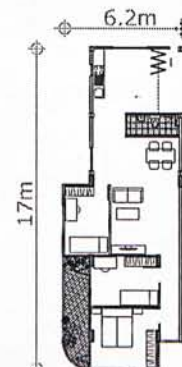
2c



74.5 sqm

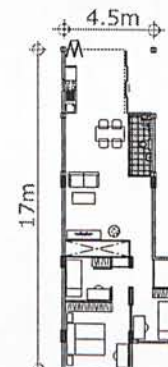
3-bedroom

3a



85.7 sqm

3b



72.4 sqm





3c



85 sqm



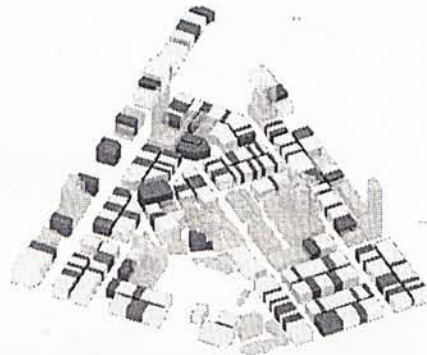
## Phasing Strategy I Reconstruction and Renovation Pattern

-  Buildings remain unaltered
-  Buildings to be renovated
-  Buildings to be reconstructed
-  Buildings renovated/reconstructed

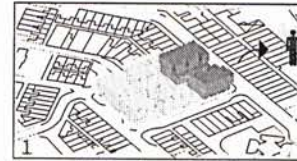
Phasing design based on every **5 years**

Total no. of tenement houses= 408

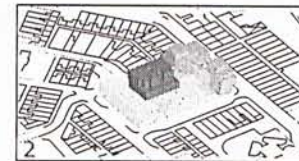
Total no. of demolition = 143 **35%** of total number of tenement houses



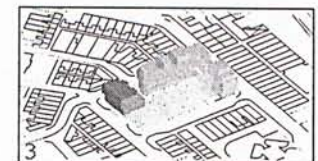
### Renewal Process I Self-Grown Pattern



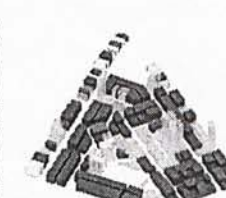
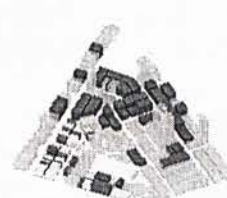
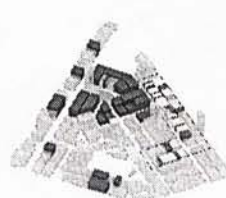
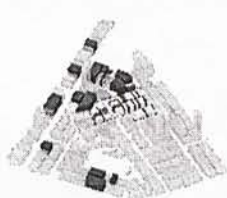
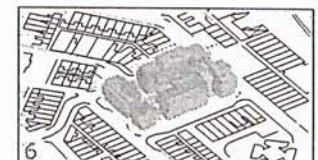
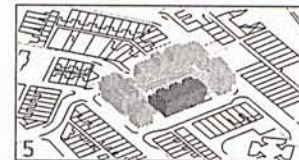
A group of building is selected to based on their age and condition as long as the owners consent and fund raising is done. Residents are moved to new-built houses in the same district.



After the first phase finished, the next phase begin and connected to the infrastructure. Extra units created can accommodate the newly affected household.

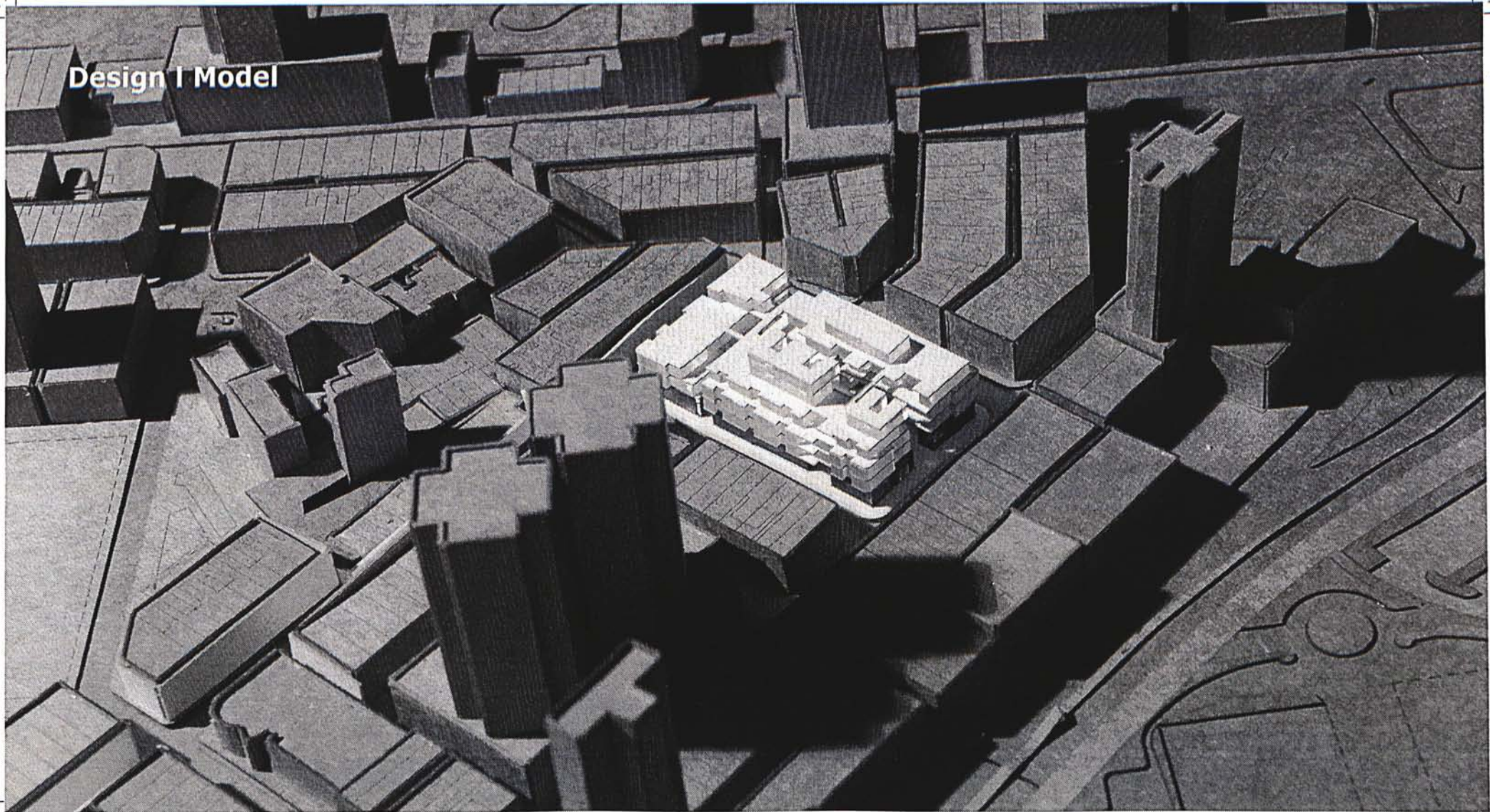


Renewal process repeat.



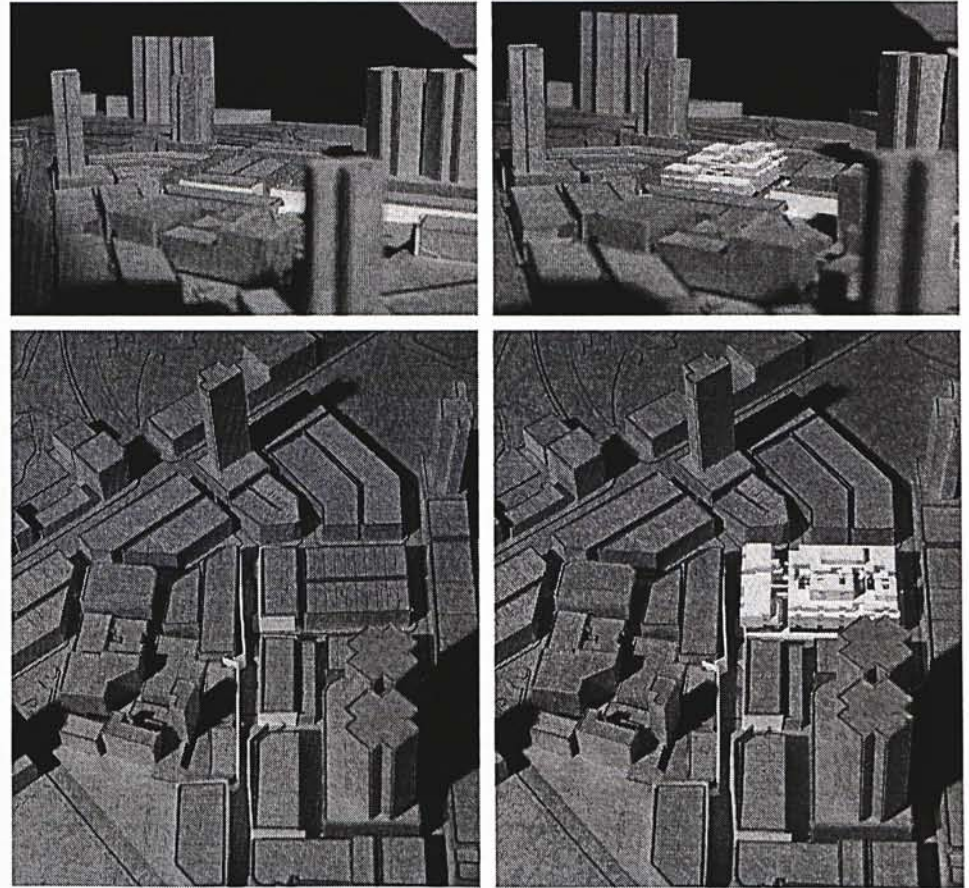


Design I Model

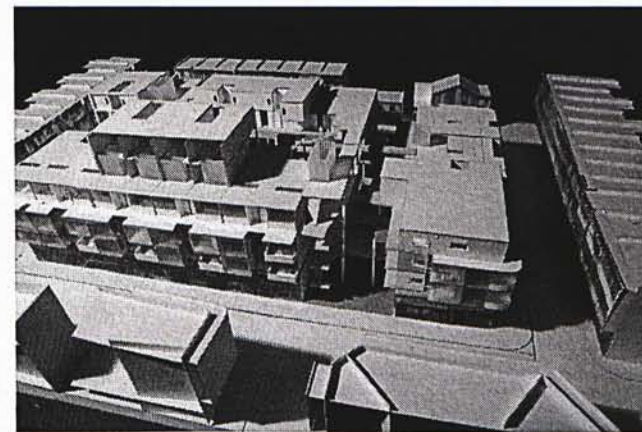
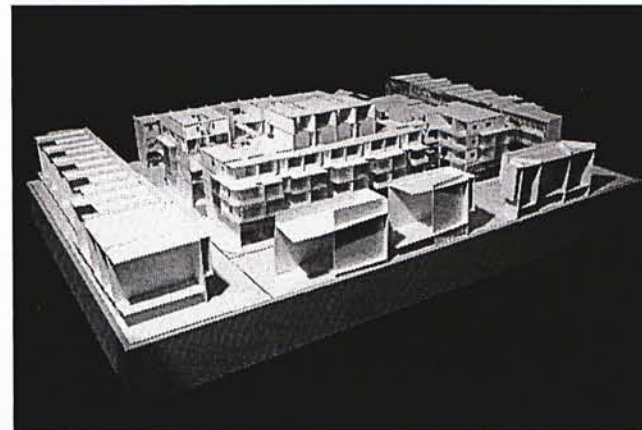




## Design I Model

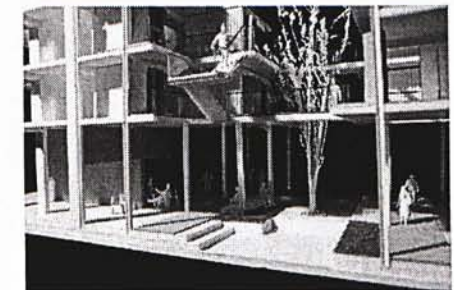
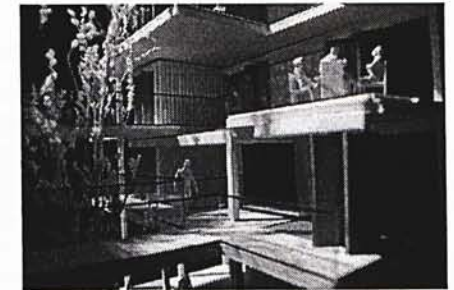
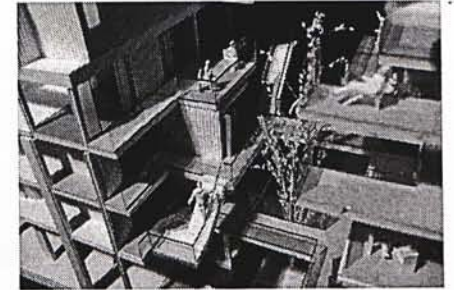
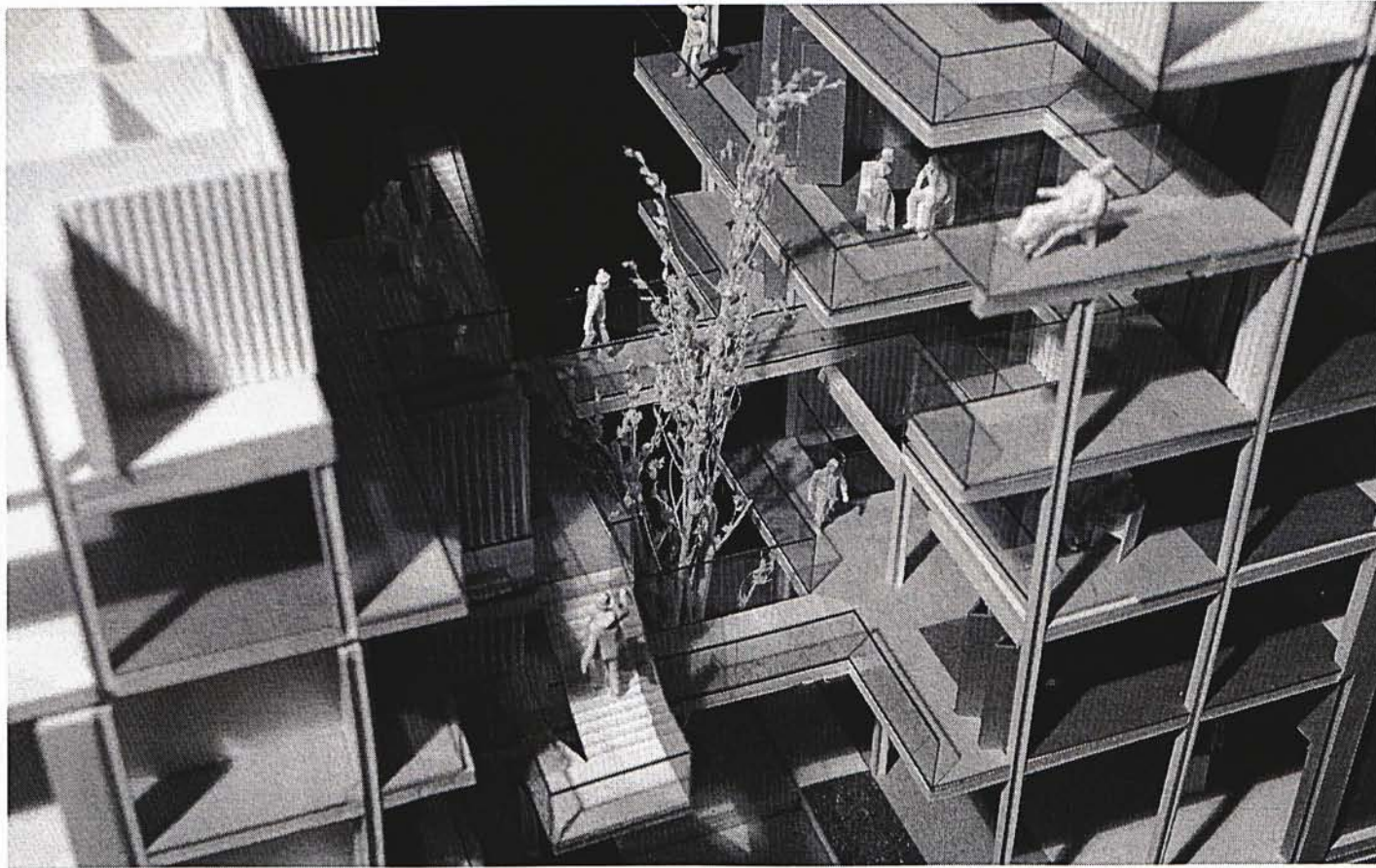


## Design I Model



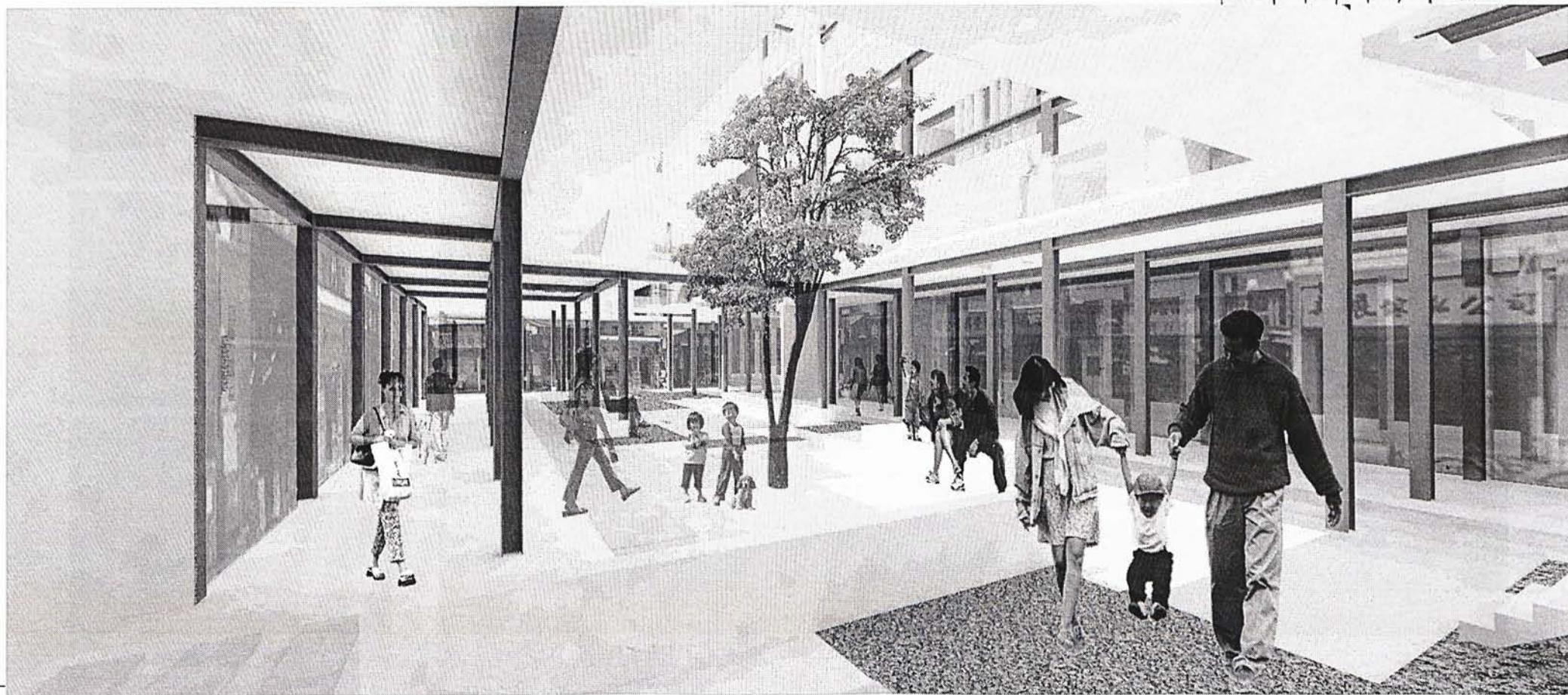
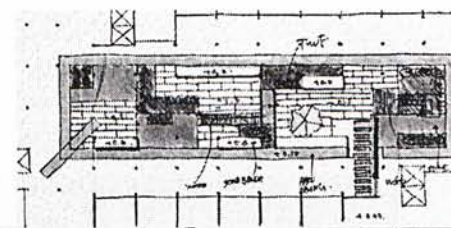


## Design I Model





## Design I Courtyard Landscape





## **Special Study**

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Materials study  
Space study

## Building Materials in SWH



Zinc plate



Ceramic roof tiles



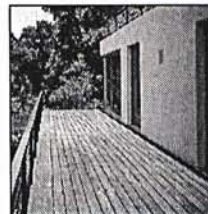
Blue bricks



Corrugated metal sheet



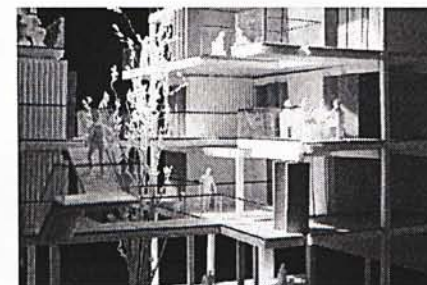
## Reintepret Materials



Wood Plastic Composite as external deck



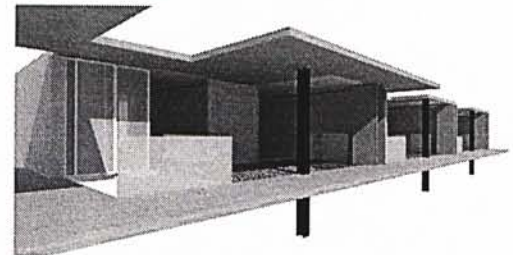
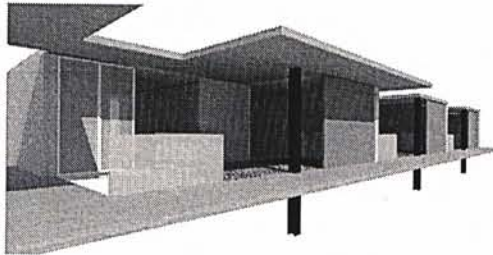
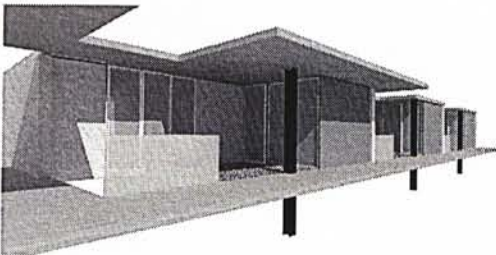
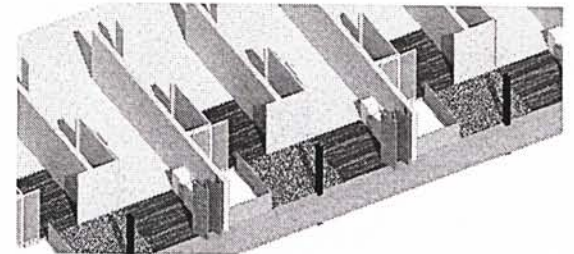
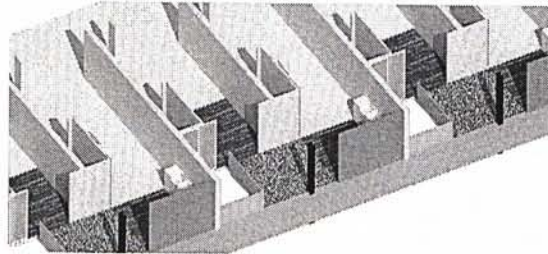
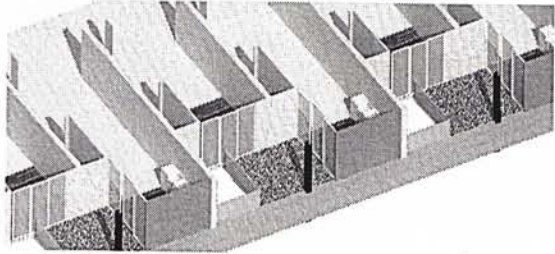
Painted Zinc folding door



Corrugated metal as external wall finishes



## Scenario I Space condition Study



Part plan, 1:500





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